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USSR Report

NATIONAL ECONOMY

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ERRATUM: In JPRS-UNE-86-006 of 25 November 1986 in article 'KUBAN' COMBINE EXPERIMENT PROGRESS ASSESSED on p 1 the introductory paragraph erroneously cites the location of the experiment as Krasnoyarsk Kray. Please change to Krasnodar Kray.

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FULL ENTERPRISE PARTICIPATION IN PRODUCTION PLANNING PROPOSED

Moscow EKONOMICHESKAYA GAZETA in Russian No 32, Aug 86 p 8

[Article by V.M. Ivanchenko, doctor of economic sciences, deputy director of the Economics Institute of the USSR Academy of Sciences: "Develop the Functions of the Basic Entity"]

> [Text] The task is to actually include the enterprises in the process of working out balanced plans that take a complete production assortment into account. We think that questions concerned with balance in assortment and dynamic range must be posed at the enterprise level.

Expansion of the economic independence of associations and enterprises--of the basic economic entity--is quite often represented merely as a redistribution of functions and rights within the present system of management. At one time, for instance, the ministry had many rights and enterprises had fewer, but enterprises ought to have more. But this formal approach to shaping the functions and rights of managerial units on the principle of the siphon does not lead to a solution of the problem.

This approach is based on a conception of the economic mechanism as a frozen rather than a dynamic system which typically has complicated dialectic interrelationships among its constituent elements. But the whole point is that a qualitatively new system of economic activity is being shaped, one that is supposed to reflect the development of the system of production relations under the conditions of comprehensive intensification of production, a further deepening of the social division of labor and industrial cooperation, integrative processes in the economy, and a growth of the social character of production. A deeper scientific understanding of the nature of socialist ownership, of the interaction of the productive forces and production relations, of commodity-money relations, of the law of planned development and the law of value in a socialist economy, which has now been attained, is also taking on considerable importance. All of this means overcoming stereotypical views of the strategies for improving the economic mechanism which have taken shape in the context of extensive development.

The conclusion of the authors of the article entitled "Key Problems of the Reform" (EKONOMICHESKAYA GAZETA, No 29) to the effect that the essence of the effort to reorganize management lies in developing the economic forms which socialist ownership is to take in accordance with the new possibilities and tasks seems to have fundamental importance. In this context creation of an integral system of management comes down above all to scientifically substantiated reflection in the economic mechanism of the overall system of production relations inherent in socialism at the given stage of its development.

Scientific analysis of the role and place of the basic economic entity in the system of production relations and in the process of reproduction is in our view taking on particular importance. It is this that makes it possible to discover the objective foundations of the economic independence of enterprises in the context of ownership of the means of production by the entire people. The qualitatively new status of the basic economic entity, which determines the structure of production relations at this level of their overall system, is in our opinion manifested above all in its following functions if we are to confine the discussion to production activity proper. They are as follows:

i. production of a high-quality product that fully meets the needs of society and a specific consumer and is in line with the possibilities of scientific-technical progress;

ii. reproduction of fixed productive capital so as to ensure a steady rise in the technical-and-economic level of production and a confident future for economic and social progress;

iii. consistent reduction of inputs of all types of resources per unit of the product produced, adjusted for its performance characteristics, on the basis of mastery of all the factors of intensification;

iv. full performance of obligations to the state budget, to consumers of the product and to suppliers and other partners in cost-accounting [khozraschetnyye] relations.

These functions are not confined to current production, but extend over expanded reproduction, which predetermines new requirements as to the level of efficiency of economic activity. It is not simply a question of carrying on business profitably, but also of the principles of pay-as-you-go and self-financing.

In accordance with the new role of the basic economic entity there is an evident need to set forth in legislation its functions in social production, to reflect those functions in a system of rights and duties.

For instance, it seems indispensable to broaden the rights and responsibility of enterprises in the domain of planning, which in our opinion makes it possible to solve the problem of the dynamic balance between the production of means of production and production of consumer goods and to eliminate the possibility of a shortage occurring. The road toward achievement of balance proposed in the article entitled "Key Problems of the Reform" (EKONOMICHESKAYA GAZETA, No 29) does not yield a solution to the problem.

The task is to authentically involve the enterprise in the drafting of plans which are balanced so as to take into account the entire assortment of products produced. In our view the problems involved in achieving that product mix and the problems of dynamic balance need to be transferred to the level of the enterprise.

This effort would be organized as follows:

The enterprise receives from the higher-level organization assignments or orders for production of products according to a consolidated products list; on that basis it works out detailed production plans and delivery plans, relying on direct relations with suppliers and consumers based on business contracts. Here the most efficient use of the production potential is achieved and full satisfaction of needs from the available resources in view of the specific requests of clients and consumers with respect to the quality of products and delivery dates. This kind of plan, balanced and dovetailed in the basic entity, becomes a reliable basis for achieving internal consistency of national economic plans.

The present attempts at internal consistency are based solely on the "downward" movement of planning targets pertaining to the consolidated products list, which does not afford the possibility of covering the necessary assortment of products.

According to estimates, 24 million different products are now produced; in the 5-year national economic plan they are represented by a consolidated nomenclature of 300-350 groups, in the annual plan by 3,000-3,500 groups, and the assignments broken down from above to enterprises reflect a nomenclature of only 40,000-50,000 products.

Nor is the internal consistency of plans with respect to the product mix ensured by the system adopted for evaluation of sales performance adjusted for deliveries. In order to improve their indicators enterprises try to consolidate product groups for which contracts are concluded. Moreover, planning authorities do not bear responsibility for the internal consistency of plans with respect to the product mix. In essence no one is responsible for it. Under the present statute the ministry is supposed to be accountable for meeting the needs of the economy and the public for the product produced, but it does not possess the necessary planning and economic instruments for that purpose.

In our view the planning mechanism for achieving the balance of production with respect to the product mix is possible on the basis of full-fledged use of contractual relations, wholesale trade, and aggregate supply of the means of production to enterprises through regional supply components.

What proposals follow from this? First, business contracts have to be concluded for all the products produced by enterprises. Second, preferential possibilities of failing to entirely discharge delivery obligations would be eliminated. Third, no provision whatsoever would be made for supplemental incentives for full performance of deliveries, and penalties would be stiffer for failure to make deliveries.

A new approach to the question of the level of efficiency of utilization of the publicly owned means of production allocated to enterprises seems necessary to development of the functions of the basic entity in the conduct of economic activity. The present level of profitability makes it possible for 22-25 percent of industrial enterprises to apply the pay-as-you-go principle, while 12 percent are capable of self-financing of expanded reproduction on the

basis of progressive technical solutions. In industry there are many low-profit enterprises and enterprises with planned or unplanned losses. For instance, in 1984 13 percent of the enterprises had unplanned losses.

The pay-as-you-go principle and self-financing, as shown by the first results of the experiment at AvtoVAZ and the Sumy NPO, develop motivation based on cost accounting to augment production, to increase production efficiency, and to make technical improvements.

Some economists consider it mandatory to bring about certain prerequisites for the transition to these forms of operation at all enterprises. For example, they propose raising the level of profitability by changing prices, improving the sufficiency of working capital, and eliminating the shortages of resources. But if this approach is taken, the problem is allowed to run in a circle: the transition to pay-as-you-go and self-financing leads to the problems of production efficiency, but the insufficient effectiveness of the economic mechanism, which also includes methods of profit distribution, stands in the way of increasing production efficiency.

Our proposal is that a thorough analysis be made during this very year of the state of affairs at all enterprises from the standpoint of production economics and the technical level of production and the necessary steps be worked out for converting them to pay-as-you-go and self-financing. The most immediate goal would be to achieve a minimum of pay-as-you-go so that the transition can thereafter be made to self-financing. It is not precluded here that in the first stage enterprises might be given substantial financial and technical aid by the state, and bank credits and financial reserves of the ministry might be used. But enterprises must obtain these resources on a cost-accounting basis and in time return them. Economic analysis will possibly show a need to alter the specialization of production in a planned way, to transform certain enterprises and attach them to enterprises or consolidated cost-accounting complexes.

Yet another consideration. So that all enterprises will mobilize their untapped potential "in good faith" to perform these tasks, without waiting for the official conversion to pay as you go and self-financing, it would be best to assign them at least two economic standards that would be stable up to the end of the 5-year planning period: one for payments into the budget and the other for formation of the wage fund. This would assist the speediest realization of all the possibilities for a growth of production efficiency.

In our opinion it is with improvement of the relations involved in the functioning of the basic economic entity that we should begin the radical revamping of the economic mechanism. All other solutions related to changing organizational structures, to developing economic methods, to the credit system and other elements of the economic mechanism would be based on the new forms of operation of production collectives.

Development of the principles of self-management in the economy signifies creation of those conditions for the conduct of economic activity in which production collectives and production workers are given the opportunity to have

an influence on the organization of production and on the distribution and use of the results of work not only directly at their own enterprise, but even on the scale of the entire economy. And solving the problems of the internal consistency of the plan with respect to the product mix and self-financing would contribute effectively to that aim.

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EXPERTS DEBATE PRICE POLICY UNDER REFORM

Guaranteed Quality Indicator

Moscow EKONOMICHESKAYA GAZETA in Russian No 32, Aug 86 p 9

[Article by V. I. Shprygin, sector head at the Scientific Research Institute of Prices: "How To Create an Antiexpenditure Barrier"]

[Text] The article "Prices and Efficiency" (EKONOMICHESKAYA GAZETA, No 21) states that prices based on production cost cannot be used for the selection of optimal economic decisions and evaluation of the efficiency of drafting and planning variants of economic development. Other participants in the debate see shortcomings in price formation primarily in the fact that prices are determined according to the scheme "production cost plus standard profit," while production cost is calculated as the mean value of actual expenditures of enterprises. In their opinion, prices are oriented toward manufacturers' interests and do not take consumers' interests into account. However, in the defense of consumers' interests, in our opinion, these economists run to other extremes. Asserting that prices should be oriented toward public use value, they deny the need for expenditures as the basis for the price.

Price Scheme

Such an understanding of the existing price scheme seems very simplified to us. The price is not only the monetary expression of the value of a product. The price also reflects certain economic relations arising among society, manufacturers, and consumers of products in connection with their production and sale. Manufacturers and consumers of products are equal partners in public production. Therefore, labor expenditures connected with the production of products, when prices are set, in all cases are compared with their results--the national economic effect and social significance of products.

I would also like to refine the concept of the existing scheme of price formation, under which prices reflect both expenditures and the public level of use value. This scheme can be represented by means of the following formula (see next page):

$$P=Cs+Ps+A,$$

where Cs is standard socially necessary production cost taken as the calculated basis for the price;

Ps is standard profit;

A is additional profit reflecting the useful effect of products, part of which is also utilized by the consumer.

It is not difficult to note that the existing price scheme is directed toward the optimum reflection of the interests of producers and consumers of products in it. It is very important to note that it is a question of standard socially necessary production cost. It implies average labor expenditures of normally operating enterprises specialized in the output of specific products calculated on the basis of progressive norms of consumption of material and labor resources. The fact that, when average expenditures are determined, the volume of output during a specific planned period for meeting the public need for it is taken into account is no less important. Expenditures of technically backward enterprises, or enterprises just mastering the output of specific products of enterprises, are excluded from the calculation.

It seems that such an approach to the determination of socially necessary production cost orients enterprises to the adoption of stepped-up plans for saving resources and lowering production expenditures. The problem is to see to it that standard socially necessary production cost fully takes into account the possibilities of scientific and technical progress to lower expenditures. However, this aspect has not been broached during the debate.

Price and Plan

However, it is erroneous to understand this matter as though the principle of reduction of individual expenditures to average expenditures should predominate in planned price formation everywhere. Price determination is an optimization process of balancing the interests of enterprises taking part in the production, sale, and consumption of products both in sectorial and territorial terms with the interests of the national economy as a whole. The indicated principle cannot be the only one, because factors causing objective differences in production expenditures operate not only in the extractive, but also in the processing, industry.

For example, in the production of machine building products at enterprises located in the European part of the USSR and in Siberia the difference in expenditures in connection with the effect of the climatic factor makes up 20 to 30 percent and more. Therefore, it is not always legitimate to set prices on the basis of weighted average expenditures of enterprises located in various USSR zones.

In connection with this further improvement in price formation should be made in the direction of greater consideration of the territorial differences in the conditions of the production and consumption of products in prices. It

seems necessary to set two price levels: on the basis of weighted average expenditures, for enterprises located in a worse climatic zone; for enterprises located in a better climatic zone, through a deduction of standard expenditures brought about by the effect of the climatic factor and, accordingly, of a certain part of the net income from the first price.

Such an approach to price setting will be able to contribute to an efficient placement of the production of products, because prices reflect more objectively the real expenditures and contribution of every enterprise to the creation of the national income. Only enterprises, whose insufficient work effectiveness is directly connected with their own oversights in work, will become subsidized.

Unfortunately, planning bodies often solve problems concerning the placement of the production of products before the level of socially necessary expenditures on their production is determined. This leads to the appearance of subsidized products and has a negative effect on the price level and, ultimately, on production proportions. Such an approach reflects the existing point of view, according to which prices should be derived from the plan and follow it. Such a point of view seems incorrect. The process of working out the plan and prices should occur simultaneously, which will make it possible to optimally reflect the interests of all participants in public production in prices.

To Take Guaranteed Quality Into Account

One of the significant reasons for the fact that prices do not fulfill the role of an antiexpenditure barrier lies in the shortcomings in the calculation of the economic effect of new equipment and its certification according to quality categories. As a result, the basic principle of planned price formation--a reduction in prices per unit of the economic effect of new products as compared with the level of prices of replaced products--is not always maintained.

There are frequent cases when manufacturers include in the calculation of the economic effect of products quality indicators not confirmed during their operation. For example, as of 1967 lists of prices of machine building products indicate the warranty service life of articles--18 months. During 1967-1985 many manufacturers often received wholesale price increases for raising the economic effect connected with a prolongation of the service life and improvement in the reliability of articles. However, only some of them prolong the guaranteed service life of products--in most cases it is, as before, 18 months. This leads to the fact that existing prices do not always reflect in a sufficiently objective manner the public use value of products and, thereby, do not fully take consumers' interests into account.

In our opinion, if during the determination of prices and increases higher quality indicators are taken into account, manufacturers are obligated to guarantee the attainment of these indicators during the use of products. Otherwise a wholesale price increase should not be established.

It seems that a reduction in prices per unit of the guaranteed quality indicator should become the key principle of formation of prices of new products. The transition to setting prices for guaranteed quality indicators will increase the personal responsibility of enterprise managers and collectives for the quality of products and completeness and dates of deliveries and strengthen consumers' positions in the price formation process.

Contractual Prices

Some economists see the main direction in the improvement in price formation in giving manufacturers and consumers of products the opportunity to solve price level problems by themselves. It is suggested that centralized price formation encompass only structure determining products and that contractual prices be applied to the bulk of articles. It is believed that this will greatly simplify the price setting procedure and shorten the time of placement of products in production. Since during price setting the final say will rest with the consumer, this will allegedly increase price substantiation.

However, an extensive popularization of the practice of contractual prices, especially of products for production and technical purposes, should be approached carefully. The opinion that in this case the time of mastering of new products is shortened is erroneous.

If manufacturers do not violate the requirements of price formation and begin to work out a draft price simultaneously with the preparation of standard-technical documents, they already know the price level 3 to 6 months before the beginning of the production of products.

The time for setting approximately 90 percent of the prices does not exceed 2 or 3 weeks, for 9 percent it is 3 or 4 weeks, and for less than 1 percent of the total number of prices it exceeds 1 month. As a rule, these are articles complex in their manufacture, requiring an expert examination of the proposed price level.

It is also illegitimate to assume that, if the economic effect is coordinated between the manufacturer and the consumer of products, consumers' interests, not to mention the interests of society as a whole, are taken into account quite objectively during its calculation. An analysis shows that approximately in every second case the economic effect coordinated between manufacturers and consumers of products and confirmed by the State Committee for Science and Technology and, accordingly, the draft price are overstated by 10 to 30 percent. In every third case they are overstated by more than 30 percent as compared with the level adopted by the USSR State Committee on Prices with the participation of the representatives of the customer and the manufacturer of products. The following data point to existing deviations:

Overstatement of Calculated Economic Effect, in %	Number of Draft Prices Coordinated Between Manufacturer and Consumer, in % of Total
0	20
up to 10	30
10 to 30	20
30 to 50	20
over 50	10

Thus, in 80 out of 100 cases manufacturers admit the fact of overstatement by them of the calculated effect (coordinated with consumers and, if necessary, with the State Committee for Science and Technology) presented to the USSR State Committee on Prices. Usually, however, even the corrected calculated economic effect is much higher than the actual effect.

Contractual prices do not always strengthen, as is customarily thought, consumers' positions in price formation processes and often even weaken them. After all, the "superfluous" instance--the state price forming body, which in case of need can protect the interests of the mass consumer with arguments--is eliminated from the price setting practice. At the same time, state control over the dynamics and level of prices is weakened.

There is also a more substantial reason why, in our opinion, contractual prices cannot become widespread. Under this procedure prices cease to take society's interests into account. Price formation begins to be guided not by the interests of the national economy as a whole with due regard for the prospects for its development, but is oriented toward current interests of individual consumers.

It is advisable to set contractual prices mainly for consumer goods. However, control on the part of state price formation bodies by means of clear methodological directives and in the form of supervision is also needed in this case. It is advisable to limit the area of application of such prices to especially fashionable and scarce products.

Calculation of Economic Effect

Moscow PRAVDA in Russian 5 Aug 86 p 2

[Article by A. Petrov, group director at the State Institute for the Planning of Automotive Industry Plants, Moscow: "Price and Evaluation"]

> [Text] The June (1986) Plenum of the CPSU Central Committee profoundly analyzed the work on improvement in management and in the entire economic mechanism. As yet it is not proceeding as energetically as the present situation dictates.

In what direction to restructure our economic mechanism, which is obsolete in many respects--this was clearly discussed in the decisions of the 27th party congress and of the June Plenum of the Central Committee. Now there is an all-around search for ways to restructure it. However, it is unlikely that

anyone has courage to openly state, citing experiments or previously adopted decrees, that everything has already been done and it is time to win laurels.

A number of unsolved problems, including the main one--old expenditure price formation--still remain both at the Sumy Scientific Production Association imeni Frunze and at the Volzhsk Motor Vehicle Plant.

Experiments cannot be set up separately for stimulation, price formation, or planning. One should experiment in an overall manner, perfecting all the elements of the future economic mechanism in their interaction. Otherwise the process of its development will be stretched endlessly.

Improving the mechanism of management, it is necessary to pay more attention to price formation, because the root of the entire problem lies here. The June Plenum of the Central Committee again noted the key importance of price formation in the development of economic methods of management. A flexible price mechanism and wages clearly connected with it should become the main economic lever of improvement in quality, reduction in expenditures, and renovation of products. They should stimulate the initiative of enterprises and planning should record this initiative in state plans and correct it in cases of need. The efficiency of planning itself under new conditions will depend mainly on how it promotes or hampers the operation of economic levers.

Most importantly, prices should reflect not individual expenditures of enterprises on the output of articles, but socially necessary expenditures and their consumer characteristics. It is time to overcome the prejudice connected with commodity-money relationships and to eliminate their underestimation in the practice of planned economic management.

However, how to determine in practice socially necessary expenditures on production, which should form the basis for new "antiexpenditure" price formation? With regard to consumer goods the problem is more or less clear here: Prices and together with them the income of supplier enterprises should be made strictly dependent on sale in stores.

For machine building products such a way is still impossible. Here instead of sale there is a planned distribution according to allocations. Incidentally, the economic reform of 1965 had already envisaged the sale of machinery and equipment to enterprises through wholesale stores of the State Committee for Material and Technical Supply (today such stores trade only in "trifles"). If the reformers of that time had courage to carry this through, perhaps the price formation problem would have already been solved. Today, however, the problem is as acute as before: It is necessary to develop wholesale trade in means of production more energetically than now.

Simultaneously, it is necessary to search for another, indirect, nonmarket method of cost determination. The point is that at the giant scale of modern machine building it is physically impossible to sell all its products through any stores whatsoever.

At the same time, if in price calculations we will continue to dispense with production cost, we will never succeed in improving the price formation system

and in developing effective antiexpenditure incentives. In order that the supplier's expenditures do not distort the objective price of a machine, at first we must completely disengage ourselves from them and pretend that they do not exist. Probably, it makes sense to completely bar the supplier's representatives from working out prices. In any case his voice should not be decisive.

The price forming function should be more closely connected with the certification of products. The goal of placing a new article under a specific quality category should not be set during certification. There are only two "work" categories, that is, the highest and the first, but there is a great number of nuances of quality. Under these conditions strained interpretations of the highest quality are inevitable. It will gradually depreciate, as was the case with the Badge of Quality. In my opinion, in general, there is no need for any signs, categories, indices, and other window dressing. A concentrated expression of quality is only in the price. Only it can reflect all nuances. How?

It is more logical to determine wholesale prices of new machinery and equipment according to the change in their technical and operating characteristics in relation to preceding models taken as basic models, that is, according to the increases in their parameters. The productivity of a new machine should be its basic price forming parameter. If, for example, the productivity of a new machine tool is twice as high as that of an old one, its wholesale price should increase by one-half. In other words, the economic effect should be divided equally between the supplier and the consumer so that it is profitable for one to produce and for the other to purchase new equipment.

The new price should be further corrected depending on the change in other parameters. For example, the new machine tool machines parts more precisely. In this case it is necessary to take the difference in the price of parts machined on the new and the old machine tool, to multiply it by some comparable output during the entire service life, to divide the obtained amount by one-half, and to add it to the wholesale price. And so forth: We calculate the economic effect according to the change in every parameter and we add one-half of it, with the plus or minus sign, to the wholesale price of the new machine.

And if the "effect" is with the minus sign? Let us assume that the new machine tool is more energy intensive. Then we calculate the expenditures of electric power for each of the machine tools for the entire period of their operation, take their difference, multiply it by the price of 1 kwhr, divide it again by one-half, and deduct it from the wholesale price of the new machine. Probably, there are also more improved methods of calculations of the economic effect and if not, they can be developed.

Using an example, I would like to stress the fundamental--antiexpenditure--innovation of such price formation. If, for example, all parameters being equal, one out of two machines is twice as heavy and takes three times as much place, according to today's yardsticks it costs more. However, under the new price system the other machine will cost more, because it is more convenient

in operation and saves production areas. What previously was "white" should become "black." The psychology of our price formers should also change.

Of course, the new price should not be eternal. The most important thing for it is to be flexible and sensitively react to the machine's obsolescence. As soon as a similar machine in its basic parameters surpassing our machine appears abroad, one-half of the profit should be immediately taken off from the wholesale price of the latter. If, however, a better model is developed in the USSR, the price of the old machine should be reduced by 100 to 120 percent of the profit so that its production becomes unprofitable right away. In such a situation the supplier would always be on the alert, trying to detect the trends in technical progress at the proper time, whose consideration or lack of consideration can either put a hole in his pocket, or reward him generously.

Skeptics can object: Wholesale price increases for quality are also provided now. Yes, they play some stimulating role, but do not solve the problem as a whole for one simple reason: The basis for expenditure price formation is not affected. Stimulating an improvement in quality to some extent, at the same time, increases also stimulate a rise in expenditures. The higher the production cost, the bigger the profit and the increases for quality.

Moreover, present wholesale price reductions for the obsolescence of products, if we look at them attentively, imply only a partial removal of the increase for quality with the retention of the ordinary profit norm. This means that the production of obsolete equipment, as before, remains profitable for the enterprise. The threatening prohibition, that is, "is subject to removal from production," hardly works here. "Objective" reasons to prolong the output of obsolete items for a year or two and sometimes even longer will always be found.

Prices calculated by the method presented above are completely free of these shortcomings. They would stimulate an improvement in quality and a reduction in production cost and establish a firm order, under which an overexpenditure of resources would be unprofitable and saving would be rewarded tangibly. The indicator of the volume of sold output would also become objective in such prices. In combination with other achievements of the experiments in Sumy and at the Volzhsk Motor Vehicle Plant, such as the distribution of profit according to standards and self-financing, this would have ensured truly full cost accounting.

Now a few words about planning. Under the new conditions it seems that it is sufficient for the ministry to approve prices, products list assignments, and stable wage and profit distribution standards for an enterprise. This is quite sufficient. All other indicators should be purely internal matters of the labor collective. Probably, it is not necessary to devise new indicators of scientific and technical progress, which [officials] now want to make an organic part of all plan sections. Situations, when their fulfillment will also conflict with common sense, as now happens with volume indicators, can arise in economic practice. In general, an evaluation of work "according to indicators" is not needed if the material situation of the enterprise and the

collective directly depends on the introduction of the achievements of scientific and technical progress.

An elimination of a large number of indicators would make it possible to reduce, for lack of use, the vast army of "curators" of these indicators in various ministries and departments. This, in turn, would make it possible to streamline the entire administrative machinery, that is, to abolish some services and to enlarge others. Probably, the same procedure could also be applied to ministries, which are too numerous. All this would help to put an end to the bureaucratic regulation of the many-sided life of labor collectives and to strengthen true centralism in management, to which the June Plenum of the Central Committee again drew attention.

It seems that the inclusion of these recommendations in the experiments in Sumy and at the Volzhsk Motor Vehicle Plant would help to establish a finished model of the economic mechanism for machine building sectors, although practice would perhaps introduce its further corrections in it. The present economic reform directed by the party toward economic intensification should be carried through. We cannot stop half-way and limit ourselves to a half-hearted cost accounting mechanism. If it is to be improved, it should be improved completely.

Graduated Prices

Moscow EKONOMICHESKAYA GAZETA in Russian No 42, Oct 86 p 6

[Article by V. Galperin, head of the Leningrad Laboratory of the Scientific Research Institute of Prices of the USSR State Committee on Prices, doctor of economic sciences: "In the Interests of the Consumer"]

[Text] An increase in the price of some resource is not an effective incentive for saving and is perceived by the consumer of this resource only as the basis for the formulation of the question of changing production cost and profit assignments, limits of capital investments, or standards of circulating capital, and prices of his own products.

In our opinion, the sources and essence of so-called expenditure price formation lie in the indifference to the prices of purchased resources. This once again points to the need for an overall approach to an improvement in the economic mechanism. Prices can become effective incentives for resource saving only under the conditions of wholesale trade in means of production and the functioning of enterprises and associations on the basis of full cost accounting, self-support, and self-financing. The need to purchase with earned funds material resources at prices taking their national economic effectiveness into account will economically force enterprises to strictly observe the policy of saving, to lower production costs, and to systematically deal with resource saving problems.

The indifference of enterprises to prices of purchased resources significantly affects the methods and practice of formation of prices of new equipment. A one-sided orientation toward manufacturers' interests is increasingly noticeable here. Thus, prices are set on the basis of the production cost of

the first year of series output, the attained profitability level is retained, and tangible wholesale price increases are introduced.

At the same time, measures aimed at lowering the cost of products for the consumer (graduated prices, price reductions, price setting on the basis of the production cost of the second and subsequent years of output, and lowered starting profitability) have not been absorbed by the economic mechanism.

The system of increases is now the basic method of price stimulation of technical progress. Their amount remains invariable as long as an article retains the superior quality category. Essentially, they are transformed into a "life rent." If during the period between regular certifications a product is removed from production in connection with the appearance of more efficient, new articles, it turns out that at the moment of removal it retains the increase, even though in reality it has become obsolete.

Nor are there restrictions on the growth of incentive funds through increases. At many enterprises this capital makes up 30 to 50 percent of the funds. After all, it is much easier to obtain an increase than to ensure a real reduction in production cost, or a 100-percent fulfillment of contractual obligations.

Thus, during the period from 1980 through 1984 the average cost of general-purpose trucks increased by 11.4 percent and of trucks, for which price increases were established, by 54.7 percent. The difference in prices between them, without taking increases into account, is now 20 percent. This means that increases have stimulated primarily the output of expensive heavy-freight machines, although the national economy also experiences a growing need for comparatively inexpensive vehicles of a low freight capacity for the transportation of small-tonnage freight.

In our opinion, it is necessary to give up the two-channel system of formation of economic incentive funds (deductions from increases and the bulk of profit) and to change over to a residual or standard distribution of the entire profit, not of some individual part of it. The existing system of price increases and reductions should be replaced with a more in-depth differentiation of profitability standards and prices of specific articles depending on their technical level, quality, and innovation, the existence of substitutes, and the nature and scale of demand.

Often it is suggested that prices of new equipment be determined on the basis of the extent of the economic effect. The price calculated in such a way is compared with production cost in order to solve the problem of the time and scale of output of products. However, these suggestions seem unrealistic.

First, as correctly noted in the article "Prices and Efficiency" (EKONOMICHESKAYA GAZETA, No 21), "components of the effect at the planning stage do not lend themselves to a precise quantitative determination."

This especially applies to such "components" as reliability or service life. For example, during the 10th Five-Year Plan the Leningrad Eskalator Production Association imeni I. Ye. Kotlyakov mastered the output of ET-type

escalators instead of the obsolete LT escalators. A 1.5-fold increase in the interrepair period--from 6 to 9 years--should have become one of the basic advantages of the new machine. In fact, however, its length was not increased and a number of other design shortcomings were also disclosed. Therefore, the output of modernized ETM-type escalators was mastered during the 11th Five-Year Plan. And again as the basic advantage an increase in the interrepair period from 6, but now for ET-type machines, to 9 years for ETM-type machines has been recorded in technical documents. An increase of 34,000 rubles in the price of a modernized escalator has been established, which comprises 50 percent of the calculated effect and 27 percent of the wholesale price. Such is the "payment for a mistake."

Second, the efficiency of new equipment depends not only on its technical parameters, but also on the specific conditions of operation.

Thus, the indefiniteness of calculations of the effect and the practical impossibility of taking the entire diversity of operating conditions into account do not make it possible to make the effect the basis for the price as some participants in the debate propose.

Incidentally, the unsuccessful experience of the 1970's, when during the determination of limit prices the efficiency of new equipment was calculated with due regard for a full utilization of all its useful parameters under ideal operating conditions, attests to this. In 1982 the procedure of determination of limit prices was changed. However, calculations of the efficiency of new equipment also now retain their abstract nature and are cut off from specific operating requirements and consumers' needs.

In our opinion, the formation of prices of new equipment should become more flexible and be based not on one, but on a number of aims.

The utilization of graduated prices oriented toward taking into account the changing conditions of every stage in the life cycle of articles is advisable for most traditional items.

When wholesale price are approved, price formation bodies on the basis of forecasts of the dynamics of expenditures and possibilities of expansion of the production and areas of application of products could also approve the period of effect of every price stage. In our opinion, expenditures of the first year of series output are the objective basis for the first "stage."

Graduated prices mean that relatively higher prices at the stage of mastering of new products subsequently are lowered, as production volumes increase, expenditures decrease, and the area of application and obsolescence of products expands. Such prices are advisable when there are no close substitutes, or their number is negligible, and when the level of production and nonproduction expenditures per unit of output is relatively high. Indefiniteness in the evaluation of the efficiency of a new article, its competitiveness, and the forthcoming dynamics of the scale of production and production cost can be added to these conditions. It is also necessary to take into account the presence of "skilled" consumers ready to accept an initially high price level.

In contrast to the price system envisaging the use of increases and reductions graduated prices apply both to manufacturers and consumers. For the determination of graduated prices there is more reliable information--production development plans and cost dynamics data. The use of graduated prices rules out the possibility of a "life rent" for the manufacturer. It will be possible to take into account the economic effect from the use of products and its dynamics by means of differentiated profitability standards.

It is advisable to establish stable prices for fundamentally new, usually expensive, equipment, for whose utilization the consumer is not yet ready, but which promises a big national economic effect when the volumes of introduction grow. However, in contrast to the existing price formation practice such prices should be oriented not toward the expenditures of the first year of series output, but toward long-term conditions at the stage of production "maturity." It is a matter of determining prices of these kinds of products on the basis of expenditures of the second or third year of series output. In this sense they will be relatively lower as compared with prices possible under the existing price formation practice. Such prices are advisable if there are sufficiently effective substitutes and possibilities to significantly lower costs as production volumes grow, as well as when it is difficult to find "skilled" consumers ready to accept initially high prices.

The manufacturer is responsible for the selection of a certain price formation strategy. Developing a draft price, he should correctly evaluate the prospects for marketing products and lowering costs and select either a graduated or a stable price for his products.

However, consumers are responsible for a substantiated selection of purchased equipment and its efficient utilization.

11439
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UNION REPUBLICS SURPLUS STOCK ACCUMULATION DEPLORED

Tashkent EKONOMIKA I ZHIZN in Russian No 6, Jun 86 pp 36-37

[Article by I. Ravich, doctor of economic sciences: "So that the Surplus Does not Pull on the Pocket"]

[Text] Despite all-out intensification of production, many managers in Uzbekistan adhere as before to the vaunted principle "the surplus does not pull on the pocket." Construction materials, equipment, spare parts and so forth in short supply saved for future use are in their opinion a guarantee of regularity and continuity in the operation of all production units. Such an approach predetermines slowing down of capital turnover and reduced profitability of production. As calculations show, uninstalled equipment costing 1 million rubles inflicts on the republic's economy arbitrary losses of 152,000 rubles a year. "Frozen" equipment amounting to tens of millions of rubles has been accumulated in Uzbekistan.

What are the chief reasons for the accumulation of a balance of excess equipment? The greater part of the "excess" occurs because changes are introduced into plans and technical documentation in the process of constructing production facilities. Another reason for the accumulation is to be found in not carefully thought out orders for new equipment. Frequently previously used equipment, released in modernization, forms a dead weight.

As we see, for the solution of the problem, questions should be put on the agenda of increasing the responsibility of planning organizations and purchasers for quality fulfillment of planning estimates, proper determination of equipment need and drawing up of delivery orders. At the same time, in modernization of enterprises, dismantled equipment, frequently able to be used, should not be dealt with thoughtlessly or written off, but possibilities should be sought out of using it, for example, in repair production or in production output not requiring marked machining precision.

Why do we find the existing system of redistribution of surplus equipment not suitable? First of all because of its ineffectiveness.

How is redistribution of surplus equipment carried out today? At the present time, enterprises and organizations, republic ministries and departments, state committees for material and technical supply, main regional

administrations of material and technical supply and main administrations for equipment procurement under the supervision of Gossnab USSR are working on this question. The main form of bringing in surpluses of material and technical resources at the ministry level is through their redistribution among jurisdictional enterprises. This process is of a planned character and is performed by supply administrations of ministries.

A major role in mobilization of excess material and technical resources is assigned to an extradepartmental system of organs of material and technical supply of USSR Gosnab. Union-republic committees of material and technical supply and main regional administrations of material and technical supply in regions of the RSFSR have operating in them departments, sections and offices for mobilization of surpluses. They set up accounting, bring in and sell material and technical resources that are unused in the sphere of production. The chief form of redistribution is selling through commission trade and fairs. And although the better part of the surplus (about 70 percent) is sold, still a large amount of commodity stocks that are in short supply remain in above-norm reserves, which are insufficiently actively put into circulation.

It was already stated that the existing procedure of finding and redistributing excess equipment and other products of the production and technical type is complex and insufficiently effective. The reason for that is that departments and offices engaged in this work absolutely do not have any technical resources which would help them to quickly determine who are in need of resources in short supply and where they are accumulating in above-norm balances.

For the more effective involvement of leftover equipment in economic turnover, it would be useful to bring in electronic computers for redistribution and sale of excess equipment. For this reason, it will be necessary at the location of organizations engaged in mobilization of internal resources to create centers that could use electronic computers of republic or regional computer centers under their jurisdiction. These organizations would operate on a cost-accounting basis. The source of their financing should be a percentage of the sum of money received for providing services relating to the sale of surpluses of material and technical assets.

An All-Union Center should be created. It would be in charge of the operation of republic and regional centers and engage in interrepublic redistribution of surpluses as well as improve accounting and reporting forms and methods of determining above-norm stocks, generalize advanced experience and monitor the work both of republic and regional centers and that of individual enterprises. Deductions from the incomes of republic and regional organizations will serve as the financing source for this center.

An automated system of determination and effective redistribution of excess equipment should solve only one task: to find an optimal--cheapest and most economical--redistribution variant. The selection of this variant boils down to a classical transport problem. At the present time, a number of algorithms and calculating methods are being successfully employed that could be used in the operation of this automated system.

The work organization of centers equipped with electronic computers for the disclosure and redistribution of surplus equipment can be set up in the following manner. Enterprises located in the service area of a given center would submit requests for needed equipment as well as provide information on surplus stocks in their possession.

Specifically, it is possible to propose the following scheme on the example of Uzbek SSR: all requests and proposals come to the center and are processed in the following manner. Proposals for machine-building products are turned over to the Uzbek SSR Main Administration for Machine Building, for metal-cutting machine tools and forging-pressing equipment to Uzglavinstrumentzapchast [expansion in full not available], for electrical equipment and cable industry products to the Uzbek SSR Main Administration of Electrical Equipment Industry, for instrument-making, electronic and radio-industry products to the office of Uzelektronradiopribor [expansion in full not available] and for sanitary engineering equipment to the Uzbek SSR Main Administration of Construction Materials. All these organizations decide which of the proposed surplus items can be used to satisfy the needs of enterprises in conformity with the stocks they have, that is in a planned manner. In the event where after redistribution within the confines of republic or regional material and technical supply offices, all the leftovers of excess equipment are not selected, information concerning them is returned to the center for a wider customer search.

Thus with the possession of a detailed data bank, the center can in short order find an optimal variant for the satisfaction of practically any requirements. In order to accelerate this process and at the same time, to standardize it, it is necessary to develop and introduce into each electronic computer an all-union classifier of machine-building products, requisitions of enterprises and organizations scheduled to be serviced, matrices of distances between all residential centers and service areas of the given center. This is necessary in the event where if surplus equipment cannot be sold in the union republic or in a particular economic area, it can be redistributed by the All-Union Center. The remains of "surpluses" of equipment here will look for a new owner in different parts of the country. Requests will be accumulated here that have not been satisfied within the confines of the republics.

In addition to this, it is proposed to put into the electronic computer of the All-Union Center permanent and variable data as well as a program for redistribution of surplus equipment among operational regions of state committees of material and technical supply of union republics and main regional administrations providing for optimization of transport connections between regional centers. The effectiveness of the system comes from more intensive location, accounting and sale of equipment that is surplus for some but needed for other organizations. This will sharply reduce the time of introducing equipment in the sphere of production and will ensure the output of additional products.

The approximate costs of development of the proposed regional automated system and acquisition of means of communication and other equipment will amount to

about 250,000 rubles. And although this does not take into account expenditures on the acquistion of an electronic computer for the regional center (it is assumed that the given task will be carried out at the republic computer center of UzSSR Gossnab), the time of its repayment will amount to only 4-5 months. It is anticipated that the early sale of surplus equipment will grow to 10-12 million rubles.

7697
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CONFORMANCE OF MODELING TO MARXIST ECONOMIC THEORIES URGED

Moscow PRAVDA in Russian 19 Sep 86 pp 2-3

[Article by L. Postyshev, senior scientific associate of the Academy of Social Sciences attached to the CPSU Central Committee: "Economic Sciences and Mathematical Modeling"]

[Text] In the work of restructuring the economy and the economic mechanism today, science is being relied on as never before. On the basis of life's requirements, it was pointed out at the 27th CPSU Congress, we need to look in a new way at certain theoretical ideas and concepts. This applies to such major problems as the interaction of productive forces and production relationships, socialist property and economic forms of its realization, commodity-money relationships, the combination of centralism and independence of economic organizations and others.

Economic theory should and can solve these problems. But this will require the adoption of a most modern arsenal of scientific methods, including all the rich and rapidly growing resources of mathematics, cybernetics, mathematical theory of optimal operation and microelectronics. According to Karl Marx's thinking, science then will approach perfection when it succeeds in availing itself of mathematics. And this is achieved, as shown by the experience of the natural and technical sciences, by the creation of scientific mathematical models representing rather fully the nature of real objects.

But economico-mathematical models compared to models of objects of the natural and technical sciences have their own specific character. One of their basic features is that they constitute a dialetical unity of extra-class science and mathematics and particularly the class science of political economy. The problem of scientific analysis of this unity both from positions of Marxist-Leninist theory and of mathematics is significant and pertinent.

Political economy sees in mathematical models only another form of its existence. But this means and requires that mathematical analogs of economic categories just as truly accurately depict the nature of modeled objects and the specific historical forms of its manifestation. But the fact is that the substance of real economic objects is dual in its nature. The process of material production lies at their basis. Seen from the technological point of view as a process of creation of certain use values, and as a process of

technological functions of society's productive forces, it also possesses a direct class character.

But a mathematical model, adequate for a real economic object, that is, reliably representing it, does not boil down to solely modeling its technological variants and potentialities. As we know, production in general outside of its connection to a concrete social form does not exist in the real world. It is an abstraction. Consequently, the model closest to reality will be that model which truly represents the dialectical unity of productive forces and production relationships of a real social and economic formation.

The principal defect of many economic models is precisely the fact that while imparting fairly well the technological potentialities of production, they practically do not show the nature or specifics of production relationships in which they are realized. The problem of mathematical modeling of production relationships requires the creation of mathematical analogs of the entire system of categories and concepts of economic theory.

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Science has approached the creation of sufficiently complete and objective mathematical models of the socialist economy from two directions: on the basis of reliable economic theory and on the basis of attempts to solve the problem of optimization of planned production by means of purely mathematical methods. The latter is linked to the fact that modern production has a multitude of variants. One and the same item can be produced by different means (technologies of processing), on different machine tools, from different materials, at different enterprises and in different regions. It is understandable that not all variants of production are equally advantageous: some are better, some are worse. If they are mathematically precisely formulated, which means that one is "better" or "worse," that is, are provided a formalized criterion of optimality, then a mathematical task arises of finding the best, as mathematicians say, the optimal variant of production.

The sources of both of these approaches are to be found in fundamental domestic developments. Thus the model of intersectoral balance is based on principles of erecting the notable schemes of simple and expanded reproduction of K. Marx and V.I. Lenin and on principles which created for the first time in the world a balance of the USSR national economy for the 1923/1924 economic year. It is quite familiar and understandable to Marxist economists, as it reflects most completely of all the used models through its mathematical analogs the system of economic categories and concepts of Marxist-Leninist economic theory.

On the other hand, the problem of optimization of a planned economy found its mathematical solution (true, one requiring a formalized criterion of optimality in which the aim of the fullest possible satisfaction of the needs of socialist society is reflected in maximization of productivity of socialized labor) at the end of the '30s in the work of the then young Leningard mathematician L.V. Kantorovich. The mathematical apparatus proposed by him, subsequently called linear programming and "rediscovered" toward the end of the '40s in the United States, marked a new stage in mathematics.

Since then this direction of economico-mathematical modeling has been rapidly developing. And like a new mathematical apparatus produced by the needs of planned production known as mathematical programming. And like an important branch of mathematical theory of optimal operation. Many important results were produced such as, for example, proof of the possibility of coordinating the interests of the collectives of all economic units and regions with the interests of socialist society as a whole. Computer technology likewise developed vigorously.

But time has moved even faster. In the past close to a half century, it seemed as if everything would have been investigated. Understandably, it is time to move from words to deeds and to realize in practice all that is positive, that has been achieved in optimal economic models. However, the results of the work done cannot be considered satisfying.

The reason for this is first of all the fact that a natural, but actually a fallacious, premise left its imprint on the developed direction of optimal modeling of the planned economy. According to it, the real national-economic economic optimum is not connected to the law of economy of time and should be realized as the result of solving on an electronic computer a certain mathematical problem for a conditional extremum. In simpler terms, in order to utilize the real possibilities of the national economy in the best possible way, one way is seen: to show the multiplicity of technical variants of production in a mathematical model or in a system of such interconnected models in order to solve on an electronic computer the problem of finding the best possible variant of the adopted criterion of optimality.

But neither today, nor in the observable future, is this realizable because of the cumbersomeness of the calculations. The problem requires finding hundreds of millions of interconnected unknowns: the fact is that we put out 24 million different designations of products. Each of them can be produced with different technologies at many enterprises and in different regions. The calculations need to be conducted on dynamic multiperiod models that take into account both future scientific and technical progress and obsolescence of equipment, limitation and exhaustibility of natural resources, international division of labor, forecasts of the dynamics of world prices and much, much else. Even this listing is sufficient to understand the utopian nature of the calculations on such models. And there are also to be added here the unsolvability of a number of theoretical problems and lack of necessary information.

The solution of problems brought up by life can come and must come from economic theory, generalizing accumulated experience and conducting when necessary economic and mathematical experiments. They well complement each other. Analyzing and comparing among them on adequate models of socialist expanded reproduction economic concepts and hypotheses of improving production relationships, the economic mechanism, systems of economic indicators and stimuli and methods of most effective utilization of commodity-money relationships under the new economic mechainsm and planned operation of economic units proposed by theoreticians and practical workers, economic theory develops the ascent from the abstract to the concrete. Realizing the

consequences of implementing certain concepts and hypotheses on restructuring of the economic mechanism and planned operation, economic theory can more validly select the most promising of them for subsequent verification and wide-scale discussion.

It is namely primarily to this end that models of socialist expanded reproduction are needed. The crux of their creation is comprehension of the fact that Marxist-Leninist economic theory is optimal per se. Hence the possibility and necessity of mathematically modeling actual theory with all its rich and deep categories and concepts, as they say, one against the other, without any kinds of additions, distortions or simplifications.

Lack of understanding of this fact, which one occasionally runs into, has its own history. Under the conditions of socialism, realization of the unity of interest of each economic unit and region and each worker with the interests of socialist society on the whole requires that all enterprises, all production technologists included in the optimal plan be able to work in a regime of economy and be normatively profitable throughout the entire time of their work. And, conversely: any invalid deviation of enterprises from the optimum is bound to be punished by reduction of profitability or even by unprofitableness.

V.I. Lenin was the first to realize and formulate with economic preciseness the possibility and necessity of operation of socialist enterprises under a regime of economy. Mathematicians subsequently provided for this broad mathematical proof, showing that every optimal plan, that is, the best of all possible plans in regard to the adopted criterion of optimality, which I may note, cannot be the object of subjective selection, has its own corresponding system of optimal prices and other economic norms and indicators namely with such properties. Moreover, guided by these prices and norms, collectives of enterprises can find the best economic and technical solutions while performing their work under a regime of economy.

Many authors and adherents of traditional models of a planned economy, taking these ideas into consideration and assuming that average expenditures are incompatible with the principle of setting up optimal prices inasmuch as they lead to variability of profitability of new and old enterprises found without further ado a simple solution in their opinion. They applied the principle of land differential rent to the means of production produced by labor.

But, as in real life, and in the theory reflecting it, there exists a unity of opposites. And this is true in the given case. As we know, mean and maximum costs are unique when these average costs are formed from a selection of different costs. Such a system is characteristic of socially necessary expenditures of labor, reflecting their prices according to Marx. He wrote: "If the best soil provides rent, this only proves that in agriculture the difference between socially necessary labor and labor individually necessary is fixed, inasmuch as it has here a basis provided by nature, while in industry it gradually disappears (K. Marx and F. Engels, "Soch." [Works], Vol 26, Part II, p 137). This idea is repeated many times. For goods of one and the same sphere of production, of one and the same kind and approximately of

one and the same quality to be sold for their cost, various different individual costs must first of all be smoothed into a single social cost.

What according to Marx makes it possible for different individual costs of production of a specific product to be expressed in a single social cost? Obsolescence of production capital.

The cost of machines is shifted to the product in time in proportion to their use value. As long as a machine is new, its contribution is biggest at the attained level of production of socialized labor. Then it becomes average (there already are machines that are better or inferior). The least contribution is that of an old machine.

Hence it follows that individually necessary expenditures of labor are all the time catching up with socially necessary expenditures since under the influence of obsolesence of capital their costs carried over to the product are growing smaller. But actually socially necessary expenditures of labor are unequivocally determined in each concrete situation by the principle of carryover of cost of capital to the product. If, for example, it were to be reduced, a portion of the cost of the capital would remain uncarried over and the net product would exceed in monetary form the really created one. And the other way around.

This very important position of K. Marx's theory to the theory and practice of planned operation of socialist economy would not be quite understand in its fundamental significance to optimization of socialist production through planning methods both by many representatives of economico-mathematical bent and by economists. But as a consequence of proper accounting of obsolescence of production capital both in planned prices and in socially necessry expenditures of labor, the one and the other become optimal. And enterprises provide in a real economy that which was previously attained only in optimal models.

In the light of what has been said, it is understandable that the practice of establishing planned prices directly according to the level of average actual expenditures rather than socially necessary expenditures, when actual expenditures are computed without taking into account obsolescence of capital and production output and with a very subjective evaluation of its quality, is cost based but by no means scientifically based.

Thus economic theory and mathematical experiments on adequate optimal models of socialist expanded reproduction can show with what objective requirements the entire system of economic levers and stimuli under conditions of scientific and technical progress should respond and how to practically implement this system.

* * *

Marxist-Leninist economic theory describes with a system of categories and concepts that real social mechanism which in practice makes it possible for the national economy and all its parts to operate under a regime of economy. Its strength and its importance lies in the fact that they deeply and truly

reflect the nature of economic processes. It is only necessary to ably develop and utilize economic theory in a Leninist and a creative way for the timely solution of the problems brought up by life as is being done today by the CPSU.

Lenin's unfading economic categories and ideas include the scientifically worked out plan, the regime of economy, cost accounting, control of the ruble, the economic mechanism operating like clockwork, democratic centralism, use of commodity-money relationships under the control of the state in the interest of the workers, greater independence and responsibility of enterprises, development and improvement of Soviet trade and others. Real life and present mathematical methods graphically confirm the depth, greatness and truth of these scientific ideas.

Constant goal-directed improvement of management methods is a prerequisite of sharp acceleration of scientific-technical and social-economic progress, activation of the human factor and creativity of the masses.

It is necessary to propose and solve from present-day scientific positions problems of transfer of enterprises and associations to real cost accounting, self-reimbursement and self-financing, to establish a direct connection between the level of collectives' incomes and the actual effectiveness of their work and to develop economic methods of management at all levels.

The classical writers of Marxism-Leninism left us the powerful dialectic method and their greatest achievements in economic theory. To make use of their heritage today means to multiply it by the generalization of new experience and sober analysis of the facts guided by the objective logic of life rather than by far-fetched dogmas and stereotypes, pointing out everything that is outmoded and obsolete--such is the requirement of the 27th CPSU Congress, opening up a way for bold research by social scientists.

7697
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ORGANIZATION OF RAMENSKIY APK COMBINE OUTLINED

Moscow EKONOMICHESKAYA GAZETA in Russian No 44, Oct 86 pp 12-13

[Article by F. Bogomolov and N. Dudorov: "Ramenskiy Agroindustrial Combine"]

[Text] At a meeting of the CPSU Central-Committee Politburo in the beginning of October, positive results in the work of Kuban Agroindustrial Combine were noted. Proposals were approved for the creation of another 13 such combines in the Russian Federation, the Ukraine and Belorussia.

The chief task of these new organizations is increased production of agricultural products and high-quality foodstuffs on the basis of modern equipment and technology and conducting production, procurement, processing and sales of products on the basis of cost accounting and self-reimbursement. It was considered advisable to create in the future on an experimental basis agroindustrial combines in other republics, krays and oblasts as well.

Today our story is about the organizational establishment of Ramenskiy Agroindustrial Combine in the Moscow region.

Management Guidelines

The production biography of this combine began in the first days of this year's July.

Its formation in an organizational sense as well as production activity under the new conditions as designated by the Model Statute is not proceeding along a well-traveled route despite the fact that the Krasnodar Kuban Combine already possesses a certain amount of experience. And this is quite understandable. After all, the character of production of the enterprises comprising the combine varies and in each concrete case the approach to its aim for high end results and for future development cannot be the same. For example, the Bronnitskiy Plant became part of Ramenskiy Agroindustrial Combine. Here they repair tractors of the MTZ type not only for farms of the Moscow region but also of other oblasts as well. In the past 2-3 years, its

capacities have not been used fully. Consequently, the combine's management will have to decide on the fate of the enterprise's production direction.

In a word, there is going on not a mechanical unification of everything that is turned over to the agroindustrial combine but a kind of certification of enterprises and organizations and determination of their type of work, problems and aims.

What does the organizational structure of Ramenskiy look like today? It includes all the kolkhozes and sovkhozes located on the territory of the rayon, experimental-production farms, a breeding farm, a fish farm, a milk processing plant, a city food combine, construction organizations, the republic racecourse (on the territory of the rayon), Rodinka Fur-Farming Farm and others, a total of approximately 50 enterprises and organizations of different ministries and departments (see chart).

Kolkhozes, sovkhozes and other enterprises and organizations coming under the combine retain their economic independence and the rights of a legal entity.

The top administrative organ of the agroindustrial combine is its council, consisting of the general director, his deputy and the heads of all the units. A presidium of the council has been created for the effective solution of questions connected with the combine's operation.

"At the present time, when production, processing, storage, transportation and sale of agricultural products are concentrated in the same hands, within the system of the combine," says its general director K.V. Kuznitskiy, "the management guideline is the same for all--to work for the highest general end result and to provide high-quality products in a diverse assortment and in good packaging.

"Of course," the general director continued, "all this is connected with agricultural production and subsequent operations, down to its sale and is not isolated from all the other units of the combine. After all, builders, and suppliers, and the material and technical supply services as well as others directly influence the end result--sale of the products. Thus everyone must be materially interested and responsible for end results and making a profit from the results of the economic activity not only of this or that unit, but of the main point--the combine as a whole."

A few words on planning. Higher organizations approve for the combine the volume of product deliveries to all-union and republic stocks, payments into the budget, allocations from the budget, the wage norm and the volume of material and technical resources. All the other indicators are worked out and approved by the combine's council.

Inasmuch as the agroindustrial combine has assumed the role of a procurement organization, it concludes contracts with kolkhozes, sovkhozes and other enterprises for the sale of a certain quantity of agricultural products and also contracts for purchasing from the population surpluses of agricultural and animal-husbandry products. The performance of these functions can be

entrusted to its individual enterprises and organizations, for example, the meat combine, the dairy plant and others.

If we were to look at the chart of the combine's organizational structure, we would find ourselves convinced that the units servicing production and nonproduction components are rather solidly represented. Actually, this is the first element, consisting of unique forms of rear units of the combine called upon to ensure production efficiency, processing and sales of agricultural products.

The combine's general director began his story concerning the units serving agriculture, processing enterprises and trade with the construction people. Perhaps every basis exists for this. Actually, new shops and plants, procurement bases and storage facilities are being built and existing ones are being modernized. It is a tremendous volume of work. Who will perform it?

Konstantin Viktorovich Kunitskiy provides a brief description of what has been achieved within the system of the combine's Argostroy Trust. He has united all the construction and installation administrations and mobile mechanized columns of the Main Administration for Construction in Moscow Oblast and other departments located on the rayon's territory. It also includes construction units of kolkhozes and sovkhozes. Today the trust has the resources to perform a volume of construction and installation work in the range of millions of rubles per year. Here 1,800 persons are employed, while the administrative apparatus of the created Argostroy has been reduced by approximately 25 percent compared to the previously existing construction units.

For the builders, their own combine-type planning and design bureau will be a major support. Specialists, in speaking of this unit, particularly stress the possibility of a sharp reduction in planning and construction time. The combine's council adopts decisions on the construction of some facility. The planning bureau, on receiving the corresponding order, is personally interested in performing it within a time period. It is engaged in technical supervision of the construction of the facility. That is, planning and construction are become organically a single process in whose successful fulfillment the collectives of these units are materially interested in.

Let us now turn to the Model Statute which defines the functions of the combine relating to capital construction. The agroindustrial combine's council determines and approves the volume of capital investment, its direction and the title lists for construction of facilities with an estimated cost varying from 1 to 4 million rubles as well as the volume of planning and contracting work for enterprises and organizations included in the combine.

Another no less important member of the combine is the repair and technical enterprise with agrochemical servicing of farms belonging to the combine. At first glance, the combination of these two different services within a single unit is somewhat unusual. But in talks with specialists, we were convinced that this is nothing extraordinary. The repair and technical enterprise was created on the basis of the former Agrochemistry Rayon Agroindustrial Association. And the most important thing is that a serious streamlining of

this base occurred with respect to personnel and in determination of the tasks and goals of production activity. Of 400 workers, 100 remain and of the administrative personnel's 40 persons, 17.

Incidentally, we would like to direct the attention of heads of kray and oblast agroindustrial committees and the rayon agroindustrial association attention to the fact that they are composed of similar units which are rather large. Consequently there is a need to compare what and where shortages or surpluses exist. And we should not wait for instruction from above as to how many and what kinds of specialists we should have for fruitful work, but display initiative and decide for ourselves while taking into consideration specific conditions.

Let us return, however, to the combine's repair and technical service. A fertility detachment has been created as part of it whose task it is to help farms boost the productivity of agricultural fields. But nonetheless, the basic volume of work has to be performed by kolkhozes and sovkhozes.

The functions of specialists of the combine's technical service are changing significantly. Igor Ivanovich Tararyshkin, chief of the combine's department of mechanization and electrification, directed attention to the fact that his collective now is concerned not only with the operation of hardware components but also with the introduction of progressive technologies, mechanization and automation of production processes.

The motor-transport services of all the enterprises and organizations forming part of the agroindustrial combine were subjected to serious modernization. A single base was created--Avtotrans of Ramenskiy Agroindustrial Complex. It consists today of 360 motor vehicles which are divided into 5 columns. Each of them specializes in hauling a particular type of load (servicing builders, the procurement and trade network and others).

On the basis of the experience of Kuban Agroindustrial Combine, the Agrosnab Service of Material and Technical Supply is now being organized at Ramenskiy. Warehousing facilities, a railside loading and unloading platform and other structures for the Agrosnab operation will be located on the territory of the combine.

The combine's executives have many interesting plans for the immediate future. Thus, at Ramenskiy Republic Racecourse, it is planned to create a breeding farm for raising race horses and to set up a race-horse school. The Rodinki Animal Breeding Sovkhoz, where the dark brown fox, mink and rabbits are bred, should become a solid supplier of fur that can be sold both domestically and on the foreign market.

On the base of the former Selkhozkhimiya, an experimental enterprise is being created which will produce a special instrument for fast analysis of the quality of fruit and vegetable and other agricultural products.

A mineral-water spring exists on the territory of Ramenskiy Rayon. And there are plans to include it in the production activities of the agrocombine.

In a word, there are many good plans for which a real basis already exists for their practical realization.

From Production to the Consumer

The farmers of the Moscow region have learned how to grow high yields of vegetables and potatoes. Unfortunately, a significant portion of this produce is lost early at different stages of movement to the consumer. In order to avoid losses, the production of agricultural products, their procurement, storage, processing and sale have been concentrated in the same hands. As can be seen from the presented chart, here are included processing enterprises, fruit and vegetable bases, a whole system of stores engaged in the sale of fruit and vegetable and other products. Moreover, the combine's sovkhozes and kollkhozes sell vegetables and potatoes at the Perovskiy and Izmaylovskiy markets in the city of Moscow.

Whereas formerly each farm of the rayon concerned itself with the sale of its own products, experiencing major difficulties in this, especially during the time of mass harvesting of vegetables and potatoes, today these concerns have been assumed by the combine's management. Here there is a deputy to the general director for procurement and sale of products, and an appropriate service, engaged in this important work, been created here. The procurement office can also purchase agricultural and animal-husbandry products in any part of the country, which then are sold both at home in the rayon and in Moscow stores. In its own trade network, a portion of the products of the dairy plant and the meat combine are also sold on the condition of fulfillment of plan targets for its deliveries to all-union and republic stocks.

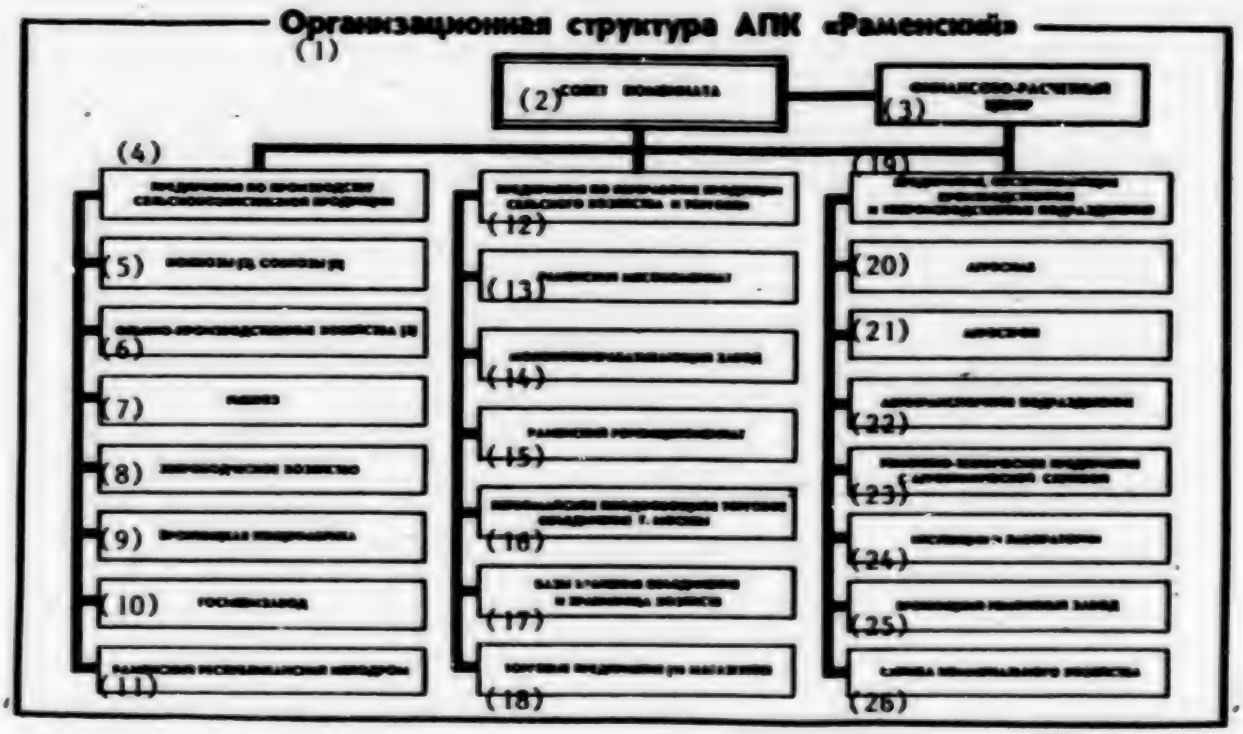
Thus the combine has assumed a wide range of responsibilities connected not only with the production of agricultural products but also with getting them to the consumer on the basis of a waste-free technology. That is, losses of products have to be reduced to zero both on the farms themselves and at depots, processing enterprises and in trade. If, for example, a portion of the green vegetable crops failed to be sold, they would immediately be sent for processing and then subsequently would be successfully sold. Other fruit and vegetable products are dealt with in the same way.

Since all the trade personnel of their own stores now form a part of the combine's staff, its management tries in every possible way to personally interest these workers in the best end results so that they efficiently conduct trade in all goods and ensure their rapid sale. For this end, specific rates of payment were established at the combine for the sale of each kilogram of this or that product. They have set rates of payment for potatoes, cabbage, carrots and other vegetables. Since the pay of the work of counter workers depends on end trade results, they endeavor to sort the produce and display it in an appropriate manner before customers.

We visited the combine's stores located in the city of Ramenskoye. Here various food products were widely presented, including sausages, dairy products and confectionery products manufactured by their own enterprises. A brisk trade was also going on in garden produce from the rayon's farms.

Choice potatoes, firm head of cabbage, carrots and various greens, in a word, the entire range of vitamin products.

Organizational Structure of Ramenskiy APK



Key:

1. As above
2. Combine's council
3. Finance and settlement center
4. Enterprises relating to production of agricultural products
5. Kolkhozes (3), sovkhozes (8)
6. Experimental-production farms (3)
7. Fish raising farm
8. Fur farm
9. Bronnitskaya Poultry Factory
10. State Breeding Farm
11. Ramenskiy Republic Racecourse
12. Enterprise for processing agricultural products and trade
13. Ramenskiy Meat Combine
14. Milk processing plant
15. Ramenskiy City Food Combine
16. Pervomayskoye Fruit and Vegetable Trade Association of Moscow
17. Association's storage bases and storage facilities of the farms
18. Trade enterprises (16 stores)
19. Enterprises servicing production and nonproduction units
20. Agrosnab [Agricultural Supply]
21. Agrostroy [Agricultural Construction]
22. Motor transport subdivision
23. Repair and technical enterprise with an agrochemical service
24. Inspections and laboratories
25. Bronnitskiy Repair Plant
26. Service for municipal services

The striking thing was that the vegetables in appearance and quality where in no way inferior to those at the height of the season at the kolkhoz market. Prices for them were somewhat higher than at state trade stores but significantly lower than at the market. Potatoes, for example, cost 25 kopecks.

Prices for fruit and vegetable produce sold at their own stores are set by the combine itself. They are changed promptly depending on their arrival, quality and consumer demand. In the period when vegetables are still few, their selective harvesting takes place and they are higher, but at the time of mass harvesting, they are lower. Each weak the trade network receives from the combine instructions at what prices to sell fruit and vegetable produce. As a result, vegetables do not lie around on counters, but quickly find buyers.

Thus, at the agroindustrial combine, rights are being significantly expanded in the area of price formation. This provides the possibility of determining the necessary level of profitability of production for this or that produce, which is sold directly in its own trade network. But what does it mean to sell vegetables at a higher price than at state stores? It means first of all confidence in the high quality of the produce and in the fact that it enjoys higher demand among customers. In the opposite case, no one will buy it at higher prices. But it is necessary to keep in mind that produce sold for all-union and republic stocks also must meet Gosstandart requirements, for the combine's profit significantly depends on this.

The agricultural products produced by the combine's enterprises and organizations going to all-union and republic stocks are paid for at existing state purchase prices. But all the rest sold through its own trade network and the market to other other customers is paid for with prices approved by the combine's council or determined on agreement of the parties. This not only expands the possibilities of the combine in development of commercial activities but also increases the responsibility of the economic services. It must regularly study market demand and correctly determine what types of products should be most effectively produced from this or that raw material, provide incentives for raising quality and be concerned with expansion of product assortment. A real possibility has emerged at the combine of effectively organizing the processing and sale of agricultural products and securing highly profitable work by all the sectors of production.

The combine's council also sets prices for products sold within the combine as well as rates and prices for rendered services. Sovkhozes and kolkhozes supply products to the combine's enterprises at existing state purchase prices and conditions.

The agroindustrial combine at any rate is the only operation for all the agricultural products produced in the rayon. It is fully responsible for volume and quality, good state of preservation, processing and sale.

In this connection, problems have arisen of providing packing and packaging in order to reduce to a minimum losses at all stages. It has become objectively necessary for the accelerated development of the base for processing and storage of produce within the framework of the combine. This is now being

given first priority. Material and financial resources are first allotted here. They are rapidly paid back from profits from the sale of high-quality products.

Inasmuch as all funds obtained from product sales fully go to the combine with the exception of payments into the budget, this directs its enterprises to increase production volume, improve product quality, curtail expenditures and boost profitability on this basis.

In order to strengthen the economy of all the sectors and successfully solve the problems of collectives' social development, centralized funds are created at the combine for development of production, social and cultural measures and housing construction, the material-incentive and the reserve fund. The combine's development fund and reserve fund are formed from deductions from profit (net income) of the farms and other enterprises and organizations coming under the combine. The centralized funds of social and cultural measures, housing construction and material incentives are formed through the centralization of a portion of the money of similar funds of the farms and other enterprises and organizations of the combine. Norms (sums) of deductions into the said centralized funds and the manner of their use are determined by the council's combine. Money from these funds not utilized in an accounting year are carried over to the following year and are not subject to withdrawal.

The Combine's Internal Bank

At the present time, the rayon's farms and various enterprises and organizations that are part of the combine directly establish relations with Gosbank and conduct all financial operations. On the example of Kuban Agroindustrial Combine, a finance and payment center is being created here. It will make all settlements between enterprises and organizations as well as with supply, procurement, processing, trade and other enterprises and organizations and with Gosbank USSR.

The combine will be the only borrower of loans a well as payer for all monetary obligations and, in relations with finance organs--the sole receiver of budgetary funds and payer of payments into the budget in conformity with the approved financial plan.

Preparations for setting up such a structural unit are already in progress. Initially it was proposed to have a dry run, as they say, of the operation of the said center parallel with the performance of financial operations by the combine's units themselves and then to completely transfer over to the new form of settlements. The principal aim in this is to achieve more efficient use on the scale of the combine of all available financial resources, rational distribution of capital investment and credit resources among the combine's units.

The finance and settlement center is called upon to do its work in conformity with the plan of the combine's economic and social development. It will make up drafts of financial and credit plans, work out and implement measures relating to the fulfillment of the financial plan's targets and strengthening

of cost accounting, financial plan discipline, reduction of production cost, growth of profitability of production and self-reimbursement of all enterprises and organizations.

The combine's units themselves will not maintain any relations with Gosbank. This function is being entirely assumed by the settlement center. This job involves timely settlement with Gosbank, suppliers and contractors as well monitoring the observance by enterprises and organizations of discipline in expenditure of material and monetary resources. The center bears the responsibility for the safety and special-purpose use of its own monetary funds, acceleration of their turnover and increased effectiveness of capital investment and economic-incentive funds. It monitors the replenishment of consumer funds and the observance of payment and cash discipline.

Thus, all enterprises and organizing belonging to the combine are closing their current accounts at Gosbank and opening current accounts at the finance and settlement center. It is no longer Gosbank but the finance and settlement center that will perform settlements between enterprises and organizations belonging to the combine as well as payments for deductions into centralized funds and for product deliveries.

What are the advantages of the finance and settlement center that it provides the combine and its member enterprises and organizations? First of all, the possibility arises of using efficiently all net monetary resources which are now frozen in the accounts of a number of farms and enterprises and to allocate them for the most pressing needs. For example, there is a need for allotting more money for strengthening the material base for storage and processing of products and the creation of different shops and production lines as well as for social and cultural measures of those collectives where this sector is lagging.

Of great importance also is the fact that with the creation of the finance and settlement center, the combine's farms and enterprises will have the benefit of credit funds without payment of interest. After all, the combine itself will be dealing in all financial operations with Gosbank through its finance and settlement center. Moreover, thanks to constant monitoring of the financial state of each of the combine's units, the settlement center will be able to detect early defects in the use of funds and adopt measures for their elimination, contributing thereby to an actual rise in the yield of invested money and growth of efficiency of the operational activity of each unit.

Financing of the combine's capital investment will be conducted on the basis of a single financial plan with inclusion of all own budget allotments and Gosbank credits. Centralization of funds provides the possibility of maneuvering monetary resources of the enterprises and using them primarily for the development of the combine as a whole and timely aid to farms and enterprises experiencing financial difficulties.

The creation of the finance and settlement center will contribute to the improvement of all economic work in the combine's units, make it possible to provide permanent control over the use of capital investment and all other funds and in the end achieve maximum production output with minimum outlays.

* * *

Thus Ramenskiy Agroindustrial Combine has only taken the first steps on the road on the path of its establishment. The formation of individual units has as yet not been totally completed. And it must be noted that many difficulties have been arising in the formation process. For example, the transfer of certain enterprises and organizations to the combine is being delayed. And there are certain departments which are trying by hook or by crook to give to the agroindustrial combine everything that is inferior, obsolete, broken down and worn out. We think that USSR Gosagroprom needs to approach with high demands the fulfillment of receiving and delivery operations connected with the formation of the agroindustrial combine.

They say that wings grow stronger with flight. Economics, style and methods of managing production at Ramenskiy will be strengthened and improved in the process of production activity. Major tasks face the large collective of the combine. The main thing now is to successfully complete the agricultural year and stably proceed with the new work conditions.

7697
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WAGE SYSTEM BASED ON KOLKHOZ GROSS INCOME DISCUSSED

Moscow EKONOMICHESKAYA GAZETA in Russian No 45, Nov 86 p 18

/Article by V. Zhurikov, chief of Administration for Organization of Labor and Wages of USSR Gosagroprom: "The Basis for Accounting -- Gross Income"/

/Text/ Various forms are being employed at the present time for stimulating agricultural workers in the interest of achieving the best final results. But experience has shown that the most progressive form is that of wages which take gross income into account.

The principles and advantages of this system of wages are examined in this article.

Wages which are dependent upon gross income volume are already being employed at the present time at some kolkhozes in the RSFSR, the Ukraine, Kazakhstan and other regions throughout the country. The following kolkhozes are included among those farms where the mentioned form of wages has proven to be highly effective: Pravda in Izobilnenskiy Rayon, Rossiya in Novoaleksandrovskiy Rayon in Stavropol Kray, Pobeda in Otradnenskiy and imeni XX Partsyezda in Tikhoretskiy Rayons in Krasnodar Kray, Put Ilicha in Pokrovskiy Rayon in Dnepropetrovsk Oblast and Bolshevik in Domodedovskiy Rayon in Moscow Oblast. This system of payment ensures high material interest by farm workers in increasing their output production while simultaneously lowering production costs.

As is known, gross output consists of three elements: material expenditures, funds for wages and net income (profit). Gross income appears as the difference between the value of the gross output of an agricultural enterprise or its subunits and the cost of the material expenditures required for the production of that output. This amount represents the value newly created by live labor and it serves as the principal source for expanded reproduction and also for satisfying the requirements of the farm workers. Thus, as production increases and as more high quality products are sold, gross income will be greater and material expenditures lower.

Hence, in order to increase gross income, there must be growth in output with reduced expenditures. On farms which achieve high productivity in their agricultural crops and livestock, the opportunities for growth are limited and

thus they will achieve an increase in gross income mainly through reductions in expenditures. Thus wages based upon normative deductions from gross income are actually cost accounting in nature, since they take into account not only the quantity and quality of the products obtained but also the expenditures required for producing them. This system is based upon an anti-expenditure mechanism which operates automatically and thus it appears as a more successful method for coordinating wages with intra-farm accounting.

USSR Gosagroprom, jointly with USSR Goskomtrud /State Committee for Labor and Social Problems/ and by agreement with AVCCTU /All-Union Central Council of Trade Unions], prepared and approved recommendations for the wages of sovkhoz and kolkhoz workers based upon gross income. It is very important for this system to be adopted at the present time, since the kolkhozes and sovkhozes have been assigned the task not only of halting the growth in production costs but also achieving a reduction in them. Indeed the basic directions for the country's social and economic development during the current five-year plan call for a 5-7 percent reduction in the production costs for agricultural products. This amounts to a tremendous sum, since the material expenditures for the production of agricultural products at sovkhozes and kolkhozes amount to tens of millions of rubles annually.

Gross income, as a criterion for the level of management, makes it possible to merge the interests of rank and file executive agents, specialists and leaders of all ranks and to direct their initiative and creative potential towards the production of a maximum amount of net product, which is the source for growth in social product and in the well-being of the nation. An important advantage of this wage system lies in the fact that it eliminates multiplicity of indicators and different trends in the use of stimuli. Instead of many types of additional payments and bonuses, individual payments are introduced for the gross income obtained based upon the annual results. Moreover, the mechanism for forming the wage fund, in accordance with the norms and depending upon the gross income, makes it possible to establish and maintain the required ratio between the rates of growth in productivity and the wages.

The wage system based upon gross income is finding very favorable soil among subunits and farms which have converted over to the use of contracts. Thus a great amount of attention has been given in the recommendations to the need for creating stable contractual collectives, which include workers in both the principal production operations and in the auxiliary and service production efforts and also leaders, specialists and employees.

Farms differ according to their level of economic development and production efficiency. At the present time, we still have kolkhozes, sovkhozes and intra-farm subunits which are operating at a loss. In a number of zones, entire branches of field crop husbandry and livestock husbandry are classified as being unprofitable. Farms also differ according to the level of their economic work and the status of their bookkeeping and accounting operations. Therefore two methodological approaches (variants) have been proposed for determining the norms (rates) for wages based upon gross income: based upon the actual existing level of production output, material expenditures and wages for the past 3-5 years; based upon normative (planned) indicators.

The first variant is recommended for use on farms having a well organized system of accounting for output produced and for the expenditures for producing such output by subunits. But the second variant is more acceptable, since the first is based upon the level achieved, a level in which, beyond any doubt, the shortcomings in the organization and payments for labor, in the production technology and at times mismanagement and other adverse phenomena are reflected.

The recommendations provide for the possibility of employing accounting prices when determining the value of the gross output, the purchase price of which is lower than the production cost. This makes it possible to employ the wage system based upon gross income not only at economically strong farms but also at unprofitable sovkhozes and kolkhozes. The use of intra-farm accounting prices makes it possible to determine the "conditional" gross income at these farms, based upon which the wage norms (rates) are established.

Such norms do not bring about an artificial increase in wages at unprofitable farms, since they represent a fixed proportion of wages based upon "conditional" gross income, for a particular unprofitable crop or type of livestock product.

A system for establishing the norms (rates) for the gross income obtained for workers, kolkhoz members, leading workers, specialists and office workers and also a system for making money advances and for computing the gross income obtained based upon annual results have been examined in the recommendations. With regard to wages based upon gross income, importance is attached to interesting a collective in producing greater quantities of high quality products. Thus the value of the goods produced is evaluated according to the actual sales prices.

When computing the norms (rates) for each subunit, a norm is established for the production of goods that is based upon the specific production conditions and the indicators for crop yields and livestock productivity achieved over the preceding 3-5 years. The wage rate (wages), additional payments for output, additional payments and bonuses for high quality work and for worker skills, a raised payment for harvesting the crops and also bonuses in the average amounts paid during preceding 3-5 years are all included in the overall payment amount used for computing the norms.

At the discretion of the farm leaders, the computation of rates can include funds from the material incentive fund and also payments based upon annual operational results. In this instance, the material incentive fund is used only as a source for the wage fund based upon gross income and also for issuing bonuses throughout the year in accordance with the results of an intra-farm socialist competition and for furnishing one-time assistance.

The established norms (rates) remain stable for a number of years and are revised only in exceptional cases: when changing the wage rates (official salaries), the purchase prices for products and substantial changes in the production structure and volume. Prior to the end of the year, the members of a contractual collective are paid an advance and a final computation of the gross income obtained, in accordance with the established norms (rates), is carried out after the products have been obtained. The advances paid throughout the year and the wages paid to additional workers are excluded from the lump

wage payment due to the subunit. The difference is the amount of payment for the gross income obtained and this is distributed among the workers depending upon their work contribution towards the final results.

In the political report to the 27th CPSU Congress, emphasis is placed upon the fact that a work collective is fully responsible and must display concern for increasing the social wealth. An increase in this wealth, similar to losses, must necessarily affect the income level of each member of the collective. The system of material stimulation based upon gross income conforms in large measure to these requirements.

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AGRO-ECONOMICS, POLICY, ORGANIZATION

READERS RESPOND TO NORM PLANNING ARTICLE, APK PROBLEMS

Moscow EKONOMICHESKAYA GAZETA in Russian No 36, Sep 86 p 12

[Article by N. Dudorov: "To Strengthen the Norm Setting 'Spring'"; reference article was published in USSR REPORT: AGRICULTURE UAG-86-020 12 Aug 86, p 66]

> [Text] The editorial department receives many letters in which readers engage in a discussion of various problems concerning the development of the country's agro-industrial complex and ways of better utilizing the potential accumulated in this sector of our economy. The article "Advanced Norms Are the Basis for Planning in APK" published in No 23 of this weekly especially evoked many comments.

This is quite understandable. The application of the norm method contributes to a reduction of losses, mobilizes for the implementation of a policy of economy in every section, and helps to obtain the greatest quantity of output with smaller expenditures of labor and funds.

"The economic mechanism of management," writes V. Chelishcheva, chief of the Main Administration of Planning of the Social and Economic Development of the Kirghiz SSR APK, "will operate smoothly if all specialists master it. For this purpose we held a 2-week seminar on the Alamedin Sovkhoz in Alamedinskiy Rayon. Such seminars are to be held in all the republic's rayons. Managers and specialists of RAPO and all kolkhozes and sovkhozes will be certified in the knowledge of economic methods of production management on the basis of training results.

The decree on improving the economic mechanism in APK stipulates that the distribution of capital investments and material and technical resources among farms will be made in proportion to the volumes of product purchases. R. Giniyatullin, deputy chairman of the Uzbek SSR Gosplan, as it seems to us, rightfully proposes that this thesis be somewhat detailed in the methods being developed:

"Appropriate norms for distributing capital investments and material resources can be applied only to agricultural enterprises with the same specialization.

If, for example, we take poultry and karakul breeding sovkhozes, there should be a different approach to them. Poultry breeding is a highly mechanized and capital intensive sector, while sheep, especially karakul, breeding is hardly mechanized and has a low capital intensiveness. Therefore, it is advisable to develop the indicated norms with due regard for planned volumes of product purchases with a differentiation according to production types of agricultural enterprises."

The proposal on developing wage norms for managers, specialists, and employees of farms and bodies for managing the agro-industrial complex in rayons and oblasts is also of interest. Since sectors producing agricultural raw materials, as a rule, always have a greater value of sold products per hectare of land than sectors producing food products, he recommends that norms be also differentiated here depending on farm specialization.

Such a link in the APK economic mechanism as contractual relations can hardly be underestimated. They should clearly define the mutual obligations and responsibility of the parties. Their importance during deliveries of products to large industrial centers rises especially. For example, this problem disturbs L. Doronina, chief of the Department of Norm Setting and Wages of the Volgograd agroprom. She believes that farm managers should be responsible for the production of products and processing enterprises--dairy plants, meat combines, canning plants, and trade organizations--should accept products in a locality through acceptance-delivery centers.

Furthermore, she points out, Agropromplodoovoshch offices have been established for shipping products to industrial centers. They are intermediaries between farms and procurement organizations. Despite the fact that the quality of products during shipment is determined by the workers of the indicated offices, procurement organizations again determine their quality.

"Who needs such duplication?" L. Doronina ends her letter.

V. Lind, first deputy chairman of the Estonian SSR Gosagroprom, also writes about the need to improve contractual relations between farms and meat and dairy combines. One conclusion can be derived from this: As yet not everything is adjusted in the mutual relations of farms with procurement and processing enterprises, although they form part of APK.

S. Konoplev, chairman of the Kolkhoz imeni Suvorov in Domanevskiy Rayon, Nikolayev Oblast, is disturbed by his problems. He rightfully complains about the fact that cost accounting principles cannot always be observed:

"We plan feed expenditure according to output based on norms. Managers and specialists are responsible for this. According to the contract the board should provide farm collectives with high-quality feed. Unfortunately, mixed feed plants bear no responsibility for this. Where are cost accounting principles here? Let us take our contract collectives in plant growing. The board cannot always allocate to them the planned quantity of mineral fertilizers in a full volume and on the necessary dates. This lack of coordination has a negative effect on the work of subdivisions. It is

necessary to increase the responsibility of all APK partners for the quality and dates of delivery of material resources."

However, the following also happens. Managers complain about the shortage of material resources. But somehow they keep silent about how equipment is utilized and what potentials exist here. Yet considerable potential exists everywhere.

For example, S. Popov, senior scientific associate at the State Scientific Research Institute for the Repair and Utilization of Tractors and Agricultural Machines, uncovers the possibilities of utilizing parts with a residual life in agriculture, which gives a tangible economic effect.

Authors of letters touch upon various aspects of improvement in the economic mechanism of management. However, one thing unites all of them, that is, a desire to search for potential for increasing production efficiency and to find ways to accelerate development of sectors of the country's agro-industrial complex.

11439
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WINTER CROP SOWING RATES AND QUALITY IN BELORUSSIAN SSR

Minsk SELSKAYA GAZETA in Russian 10 Sep 86 p 1

/Article: "Winter Crop Sowing: Are the Rates and Quality Being Achieved In All Areas"/

/Text/ Winter crop sowing work is being carried out in an organized manner and at high rates at kolkhozes and sovkhozes in Dokshitskiy, Rossonskiy, Chashnikskiy, Lepelskiy, Ushachskiy, Zelvenskiy, Smorgonskiy and Myadelskiy rayons, where more than one half of the areas have been sown.

At the same time, use is not being made in all areas of the opportunities available for carrying out the sowing in a timely manner. Sluggishness is being tolerated and the work is not being carried out during the best periods at a number of kolkhozes and sovkhozes in the northern rayons of the republic -- Beshenkovichskiy, Dobrushskiy, Braslavskiy, Lioznenskiy, Postavskiy, Sennenskiy, Krupskiy, Oshmyanskiy, Kirovskiy, Goretskiy, Mstislavskiy and others. Here, prior to the completion of sowing, less than a week remained of the optimum period and by the first week of September only from 15 to 40 percent of the areas had been sown.

Mass sowing work will be carried out over a period of 5-6 days in the central rayons of the republic. However, commencing with the very first days, the required rates for the sowing work will not be followed in Zhlobinskiy, Baranovichskiy, Lyakhovichskiy, Rogachevskiy, Buda-Koshelevskiy, Checherskiy, Vetkovskiy, Krasnopolskiy, Bobruyskiy, Kostyukovichskiy, Mostovskiy and Korelichskiy rayons. Less than 3-4 percent of the sowing areas will be sown daily and this will lead to a disruption in the established schedules.

Some rayons and farms have still not completed their work of applying organic fertilizers and they are not making full use of the opportunities available for applying ammonia liquor and liquid complex fertilizers in behalf of the winter crops.

Some kolkhozes and sovkhozes are failing to carry out the requirement for using the intensive technology for sowing their winter crops and they are tolerating incidents of low quality soil preparation. For example, the plowing was initially carried out using plows and without adequate turning over of the soil and subsequently the soil preparation work was carried out using disks. This resulted in the sod being raised to the soil's surface and also in poor leveling of the soil prior to sowing.

At the Molodaya Gvardiya and Novaya Zhizn' kolkhozes in Ivyevskiy Rayon and the Kolkhoz imeni Lenin in Volozhinskiy Rayon, the soil plowing work was carried out in the absence of skim coulters and rollers, split furrows were not covered and headlands were not set aside.

There were also incidents of untreated seed being employed in the winter crop sowing work.

The specialists attached to some rayon plant protection stations were removed from exercising control over the carrying out of seed treatment work and also over the quality of such work. On the basis of a check, it was established that in Beshenkovichskiy and Dubrovenskiy rayons specialists attached to this service had not selected even one sample of treated seed. At the same time, instances of low quality treatment work have been noted at some farms here.

The technological track is being ignored as an element of the intensive technology at the kolkhozes imeni Lenin and Imeni Chapayev and at the Morozovichi Sovkhoz in Buda-Koshelevskiy Rayon.

Certainly, measures were undertaken aimed at correcting all of the violations noted in the various areas. But the problem was one of ensuring that such technological violations never occur out on the winter fields in the first place.

Some rayon agrochemical services are not exercising effective control over the uniform distribution of mineral fertilizer to the kolkhozes and sovkhozes. For example, this applies to a large number of farms in Smolevichskiy and Voronovskiy rayons.

Use is not being made in all areas of the opportunities available for combating weeds in intensively cultivated sowings. The periods for the pre-sowing treatment of winter crops with herbicides are being overlooked on some farms and in some rayons.

It is today that we must display concern for the cleanliness of next year's winter crop sowings. A high effectiveness against sowthistle, matricary and other difficult to eradicate weeds is being achieved through applications, on the second or third day following sowing, of 0.3 kilograms of the Simasine herbicide (recommendations for this agricultural measure were printed in the 29 August issue of SELSKAYA GAZETA).

However, this work is not being carried out in Beshenkovichskiy, Verkhnedvinskiy or Glubokskiy rayons in Vitebsk Oblast, where one third of the winter crop fields has already been sown. The farm agronomists have obviously forgotten that more than 80 weeds were observed per square meter during this year's grain harvest and this resulted in a shortfall in the crop. Such mistakes cannot be tolerated in the future.

The oblast agro-industrial committees, the RAPO's /rayon agro-industrial associations/ and the kolkhoz and sovkhoz leaders and specialists must carry out the sowing of winter crops in an organized, timely and high quality manner. Special attention must be given to observance of the entire complex

of technological operations associated with the intensive cultivation of winter crops and to the accurate and timely carrying out of these operations. In addition, all manifestations of oversimplification in carrying out the work must be eliminated. The carrying out of these tasks will serve to guarantee that the programmed yields for the winter grain crops will be obtained next year.

7026
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MEASURES FOR IMPROVING AUTUMN PLOWING WORK DISCUSSED

Minsk SELSKAYA GAZETA in Russian 12 Oct 86 p 1

/Article: "If Autumn Does Not Produce Results -- Wait!"/

/Excerpts/ Highly effective autumn plowing can be achieved only if it is carried out in a high quality manner and during the best periods. Many leading farms throughout the republic are aware of the value of early autumn plowing. Here the spring crop fields are plowed mainly during August and September, in order that cultivation, the covering of furrows and other operations can be carried out during the period remaining before winter.

By the first half of October, the kolkhozes and sovkhozes in Maloritskiy, Chashnikskiy, Lelchitskiy, Narovlyanskiy, Oktyabrskiy, Stolbtsovskiy, Zhitkovichskiy, Checherskiy, Shchuchinskiy, Belynichskiy, Glusskiy and some other rayons had already completed their autumn plowing work. At the same time, this work had been carried out on 2,194,500 hectares throughout the republic as a whole -- 86.3 percent of the plan. This included Vitebsk Oblast -- 78 percent, Minsk -- 84, Brest -- 85, Mogilev -- 89 and Gomel and Grodno oblasts -- 92 and 90 percent respectively of the areas required. Only Grodno and Mogilev oblasts followed the autumn plowing schedules or were close to them.

The best autumn plowing periods were overlooked to a considerable degree in Lioznenskiy, Gorodokskiy, Postavskiy, Chervenskiy, Logoyskiy, Kamenetskiy, Cherikovskiy, Baranovichskiy, Volozhinskiy, Beshenkovichskiy, Miorskiy and Semenskiy rayons, where by 10 October from 61 to 75 percent of the areas had been plowed.

One reason for the disruptions in the preparation of soil for the future harvest is the fact that many leaders and farm specialists have accustomed themselves to the traditional practice of carrying out the autumn plowing at a later date, they allocate too few tractors for this purpose and they do not ensure highly productive use of the units. A portion of the machines lie idle owing to untimely repair operations and shortages of machine operators. A large number of tractors are operated only in one shift and the machine operators, as a result of poor labor organization, are not carrying out their assigned shift output norms.

A number of farms are tolerating low quality in the plowing of their soil. Some machine operators are dividing up their fields into plots "by eye,"

without marking them out, and they are not adjurting the plows for the first and subsequent runs over a plot. Thus, high crowns and deep split ridges are observed on the arable land.

More favorable conditions developed this year for carrying out bastard fallow working of the soil, since early autumn plowing was carried out over a considerable area. However, this important agro-technical method for combating weeds is being ignored on a number of farms.

Autumn applications of organic fertilizer are not being organized properly in all areas. Less than one fifth of the amount required by the task was applied in Mstislavskiy, Klimovichskiy, Chausskiy, Logoyskiy and Zhitkovichskiy rayons.

Under this year's conditions, a repetition of the neglect displayed in past years cannot be tolerated. At those times, the autumn plowing was carried out on a number of farms just prior to the onset of frosts and at some kolkhozes and sovkhozes and in some rayons the autumn plowing was not carried out whatsoever over considerable areas.

Therefore, measures must be undertaken in all areas aimed at raising considerably the rates for autumn plowing, bastard fallow working of the soil and applying fertilizer. A maximum number of tractors should be made available for this work, particularly caterpillar type tractors and other equipment, double shift operations should be organized for the units and the shift output norms and high quality work should be ensured on a daily basis. Moreover, more extensive use should be made of chisel cultivators for working the soil.

All equipment of the Selkhozkhimiya rayon associations must be concentrated in behalf of shipments and applications of organic fertilizer and this equipment must not be diverted for work not associated with raising the fertility of the soil

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IMPORTANCE OF AUTUMN PLOWING STRESSED

Minsk SELSKAYA GAZETA in Russian 5 Sep 86 p 1

/Article: "Autumn Plowing -- The Foundation for the Future Harvest"/

/Text/ A great amount of work must be carried out during the autumn period. And despite complicated conditions and a great amount of tension, the future harvest of spring crops must not be overlooked. Within the system of agrotechnical measures, an important role is played by timely autumn plowing of the soil.

The experience of leading farms and the experimental data of scientific institutes have proven that plowing in behalf of spring grain crops during August and September, compared to October plowing, makes it possible to obtain yields which are higher by 3-4 and more quintals of grain per hectare. Thus this important factor must be taken into account in all areas.

This year the farms in many rayons took advantage of the favorable weather conditions, they skilfully organized their harvest operations, they quickly removed the straw from the fields and simultaneously with making preparations for sowing their winter crops, they carried out their autumn plowing. As a result, the kolkhozes and sovkhozes in Luninetskiy, Maloritskiy, Yelskiy, Checherskiy, Berestovitskiy, Zelvenskiy, Svislochskiy, Slonimskiy, Kletskiy, Slutskiy and Starodorozhskiy rayons have carried out autumn plowing on 40-57 percent of their areas and bastard fallow working of the plowed tracts is already being carried out.

At the same time, many farms are not attaching proper importance to this type of work. This is readily explained by the fact that the schedules for autumn plowing operations are still not being followed. Vitebsk Oblast, for example, should have carried out autumn plowing on 157,000 hectares by 1 September and yet only 55,900 hectares were plowed here. By this same date, Gomel Oblast had fallen behind by 47,000 hectares, Brest Oblast -- 33,500 and Mogilev Oblast -- by 11,500 hectares.

The best periods for autumn plowing work are being ignored by the kolkhozes and sovkhozes in Baranovichskiy, Kamenetskiy, Vitebskiy, Dokshitskiy, Lioznenskiy, Miorskiy, Orshanskiy, Rossonskiy, Shumilinskiy, Petrikovskiy, Zhlobinskiy, Buda-Koshelevskiy, Dzerzhinskiy, Chervenskiy, Belynichskiy, Kirovskiy, Klichevskiy, Osipovichskiy and Shklovskiy rayons, where by 1 September less than one fifth

of the areas have been plowed. Moreover, on farms in Braslavskiy, Gorodokskiy, Dubrovenskiy, Polotskiy, Postavskiy, Ushachskiy, Chashnikskiy and Goretskiy rayons, autumn plowing had been carried out on only one tenth of the areas.

A check on the situation established the cause for these low plowing rates -- the absence of proper organizational work directly at the kolkhozes and sovkhozes and in the brigades. Double-shift operations have not been organized in all areas for the plowing units and proper agronomic and technical control has not been established over the productive utilization of machines. By no means are all measures being undertaken aimed at disseminating on an extensive scale the leading experience accumulated in the organization of autumn plowing work. Just as during the grain harvest operations, maximum incentives should be made available to the best tractor operators during the autumn plowing work and skilful use should be made of all moral and material stimuli.

On some farms the plowing is being carried out on fields from which not all of the straw has been removed, with use being made of plows that have not been properly adjusted and which lack skim coulters. In some areas, the crop residues are being worked into the soil in a very poor manner and the crown ridges and split furrows are not being worked properly. Thus, at the Kolkhoz imeni Kirov in Drogichinskiy Rayon, the autumn plowing was carried out on areas from which not all of the straw had been removed and without the use of skim coulters. At the Chechera Sovkhoz in Buda-Koshelevskiy Rayon, the plowing was carried out in the absence of skim coulters and ring rollers.

The intensive use of heavy agricultural machines out on the fields leads to strong water-logging of the soil, especially soil with a heavy mechanical composition. As a result of annual plowing to the same depth, a subsoil base is formed which tends to bring about a deterioration in the water-air and nutritional regime of the soil. In this regard, the republic's kolkhozes and sovkhozes must make more extensive use, within the system of autumn plowing methods, of chisel cultivators for the deep loosening of soil. On sloping lands, such loosening will make it possible to reduce the water and erosion processes.

It is precisely now that we are laying the foundation for the 1987 harvest of spring crops. Timely autumn plowing operations will enable the farmers to solve successfully the plans for increased productivity during the second year of the five-year plan.

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BRIEFS

WINTER CROP SOWING COMPARISON--(Situation on 5 September). All of the republic's oblasts are engaged in sowing their winter crops. For a plan which calls for 1,312,200 hectares to be sown, 334,500 hectares have actually been sown -- 25.5 percent. The fulfillment of the plan for sowing operations by oblasts appears as follows (in percentages): Vitebsk -- 46.9, Minsk -- 31.0, Grodno -- 26.8, Mogilev -- 25.3, Gomel -- 16.7 and Brest 6.2 percent. For the sake of comparison, we will cite some data for last year. The highest sowing percentage for 6 September occurred in Vitebsk Oblast -- 36.7 and the lowest was in Brest Oblast -- 4.4. For the republic as a whole, 22.2 percent of the winter crops had been sown by this same date last year. The farmers in Vitebsk Oblast and also those in the northern rayons of Grodno, Mogilev and Minsk oblasts should be reminded that their best periods for sowing winter wheat, according to the recommendations by scientists, expired on 5 September and that the periods for sowing rye end on 10 September. /Text/ /Minsk SOVETSKAYA BELORUSSIYA in Russian 7 Sep 86 p 1/ 7026

CULTIVATION PROBLEMS--In a number of rayons and at many kolkhozes and sovkhozes, the sowing of winter crops is not being carried out at the proper agro-technical level and violations are being tolerated in the cultivation of these crops using intensive technologies. The established tasks for applying organic fertilizers are not being carried out. Disruptions have taken place in such important operations within the soil cultivation system as the removal of stubble and early autumn plowing, especially in Vitebsk and Mogilev oblasts. /Excerpt/ /Minsk SOVETSKAYA BELORUSSIYA in Russian 11 Sep 86 p 1/ 7026

UNFAVORABLE WEATHER CONDITIONS--Autumn this year throughout the republic began with cold and rainy weather. The average daily air temperature at the present time is lower than the average value established over a period of many years by 2-4 degrees and the maximum for the most part does not exceed 12-17 degrees. Fine conditions prevail for the formation of the sugar beet crop and other root crops. However, a predominance of cloudy weather is adversely affecting the accumulation of sugars. The wilting of haulm and the aging of tubers are being observed in potato sowings in almost all areas. During the last days of August, rain fell in all areas, with strong downpours in some rayons -- from 20 to 65 millimeters of precipitation fell during a 24 hour period. At the same time, the moisture supplies in the soil were augmented considerably. The arable soil layer on fields intended for the sowing of winter crops contains 25-40 millimeters of productive moisture. Fine conditions have been created for working the soil, for sowing the winter crops and for the appearance of healthy seedlings. The

mass sowing of winter crops is in progress in the republic's northern and central zones. During the next two days, the southern rayons will commence their sowing operations. The majority of farms and rayons are carrying out their preparatory and sowing work at high rates, while observing the complete complex of technological requirements. At the same time, the preparation of the soil has still not been completed on a number of farms in Pinskiy, Kamenetskiy, Ivanovskiy, Gaitsevichskiy, Brestskiy, Soligorskiy and some other rayons. The first half of the optimum periods for sowing the winter crops has expired in the northern and northeastern regions of the republic. However, less than one third of the areas has been sown on farms in Goretskiy, Mogilevskiy, Mstislavskiy, Shklovskiy, Sharkovshchinskiy, Braslavskiy, Sennenskiy, Shumilinskiy, Orshanskiy, Polotskiy, Borisovskiy, Krupskiy, Logoyskiy, Vileyskiy and Molodechnenskiy rayons. The kolkhozes and sovkhozes and the agro-industrial associations and committees must make maximum use of the favorable conditions that have been created for the sowing of winter crops and they must carry out this work during the best periods and on a high agro-technical level. /Text/ /Minsk SELSKAYA GAZETA in Russian 3 Sep 86 p 3/ 7026

WEATHER AND CROPS--During the past week, rain fell in all areas throughout the republic. As much as 15-20 millimeters of precipitation (approximately one to one and a half times the norm) fell over a large portion of this area. This rainfall augmented the supplies of useful moisture in the soil and it improved the conditions for the formation of the potato and sugar beet crops. Such conditions are having a favorable effect on the lodging of flax stock, which takes place over a period of 12-15 days. Stronger control must be exercised over the lodging process and the timely raising and sale of the flax stock to the state must be organized. The root crops continue to grow on the principal tracts. Improvements have also taken place in the conditions for cultivating the soil in behalf of winter crop sowing operations. The period of tense field work is at hand: sowing of winter crops and harvesting of potatoes, sugar beets and vegetables. The harvesting of grain crops and flax has still not been completed. Thus use must be made of each good day and hour in order to ensure that this work is completed. Computations carried out taking into account the existing and expected agro-meteorological situation reveal that favorable conditions for the sowing of winter crops this year will occur in the northern half of the republic from 1 to 10 September and in the southern half -- from 5 to 15 September. Sowing on peat soils should be started five days later in order to ensure that the plants do not become overgrown prior to the end of the growing season. The observance of the established optimum sowing periods for rye and wheat will enable the plants, prior to the end of the growing season, to take root well and to thicken out, that is, to prepare better for the winter season. Later sowings will enter the winter period only weakly developed and thus they are marked by a higher percentage of plant losses and even with favorable winter conditions they account for considerable crop losses. Winter rape seedlings sown in behalf of the 1987 harvest are threatened to a serious degree by cruciferae family flea-beetles. The density of the pest is high and active infestation by them of seedlings is being observed in all areas. The larvae of the turnip fly and the cabbage white butterfly pose a strong threat to post-harvest and intermediate sowings of forage cruciferae family crops. The numbers of these pests is exceeding the threshold value to a considerable degree in Ivatsevichskiy, Grodnenskiy and Volkovysskiy rayons. The larvae of the cabbage white butterfly and aphids

are inflicting damage on cabbage plantings in the republic's northern and central zones. The crops must be inspected on an urgent basis by the plant protection specialists of kolkhozes and sovkhozes. For protecting the winter rape and other forage crops, use should be made of Metaphos, Volaton, Phazolon, Sumitsidin and Malathion insecticide and in the dosages recommended by the specialists. In cabbage plantings, dendrobacillin and entobacterin should be used for combating leaf miners and against strong infestation by cabbage aphids -- Antio, Malathion insecticide and phosphamide.

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FALL LIVESTOCK FEED SITUATION REVIEWED

Moscow AGITATOR in Russian No 19, Oct 86 pp 15-18

[Article by V. Onisovyets: "Autumn Concerns of Animal Husbandry Workers"]

[Text] Autumn, a busy season in rural areas, is here. Workers at kolkhozes, sovkhozes and all enterprises and organizations in the agro-industrial complex are striving for a rapid and loss-free completion of the harvest and to provide sufficient amounts of diverse feed for animals. Urgent tasks are: timely winter preparations at farms and feed facilities, efficient use of improved potentials and better results from animal workers' labor. In the first half of the year they substantially increased production and are continuing to do so.

During the eight-month period of the current year, livestock and poultry purchases increased 7.5 percent compared to the same period last year, milk purchases -- 4.6 percent and egg purchases 5.2 percent. There have been notable increments in milk sales at farms in Belorussia, the Buryat ASSR, and Perm and Amur Oblasts. Labor is precisely organized at complexes and feedlots in Azerbaijan, Moldavia, Kirgizia and Penza Oblast. In these places the state has bought considerably more livestock and poultry than it did last year.

As was noted at the June (1986) CPSU Central Committee Plenum, it is important to consolidate the fairly good results obtained in animal production. Growth rates must also be further increased. This is realistic, but it requires great efforts. Its directions are: strengthened production and technological discipline, the use of economic tools in management, progressive forms for organizing and stimulating labor, above all, cost accounting and collective contract. Unfortunately these tools and stimuli are by no means operating at all farms, neither are they working at full force.

In spite of the established tendency to increase animal husbandry productivity in most regions of the country, some oblasts and republics have not been able to overcome previous lagging and are still satisfied with low milk yields and weight gains, have high feed and resource outlays, low profit rates and are sometimes loosing money. With active help from agroprom specialists and zonal scientific institutions, it is important to determine measures to eliminate shortcomings at each farm and to outline ways of attaining steady growth in the output of meat, milk and other products.

A whole set of farm tasks arises in preparing animal farms for winter. They are solved best where timely concern is shown. Quite a few farms prepare "winter quarters" for their animals on time, not putting off repairs until the onset of cold. There should be no oversights here. The saying is: "Wintering should be snug and warm." This means that after the pasturing season every effort must be exerted to put livestock into high quality heated housing and to carefully check all water supply and electrical systems. For example, at the Rodina Kolkhoz in Volnovakhskiy Rayon, Donetsk Oblast, repairs on animal housing and feed facilities were completed in the middle of summer. Feedlots and a barn for storing 1,000 tons of hay have been built near the animal farm here. A service complex with a cafeteria, store, service point, barbershop and sauna bath have been built at Farm No. 2, while at Farm No. 1 the service complex was built earlier. Hard surfaced intrafarm roads have been put in order. However, the matter is not restricted to farm concerns. It is also necessary to prepare farm collectives for the forthcoming winter. R. D. Ignatev and T. D. Krivchun, party group organizers at the farm, are engaged in this. Party groups are directing labor rivalry towards increasing output and timely preparations for winter.

The Udarnaya Leninskaya Brigada Kolkhoz in Belyayevskiy Rayon, Odessa Oblast is completely prepared for winter. The feed facility has been repaired and put into operation, an Animal Husbandry Workers House, rooms for psychological stress reduction, an outpatient clinic and a personal service reception point have been put into operation. Most importantly, the farm has sufficient feed supplies: 2.4 tons of hay, 2.5 tons of root crops and 12 tons of silage have been put up for each cow. Each standard head of livestock has been allocated 36 quintals of feed units, thus creating the basis for further improvements in animal productivity. During the first half of the year milk yield per cow at the kolkhoz averaged 2,117 kg for 600 cows, a 494 kilogram increase over the previous year.

Party activists, trade union and Komsomol organizations, deputy groups and people's control posts should assist in improving animal husbandry workers' working and living conditions during the winter period. These units are entrusted with bringing order into conditions involving work time, trade, personal, medical and cultural services to farm workers. Jointly with public health, trade and service organs, RSFSR kolkhozes and sovkhozes have built and outfitted 3,300 new outpatient clinics and medical points, 6,700 trade points and 3,600 personal service points. During the winter period more than 63,000 red corners, 27,500 recreation and eating rooms and more than 54,000 dressing and shower rooms will be in operation at farms in the RSFSR. Such facilities are needed at every animal farm.

This year efforts by crop growers and machinery operators accomplished much to increase feed production. Under difficult weather conditions, everywhere fairly good harvests of hay, silage corn and root crops were obtained. Hay and haylage harvests were better organized than in previous years.

According to data from the USSR Central Statistical Administration, by 8 September harvests throughout the entire country totaled 98.4 million tons (in feed units). This is higher than at the same time last year. It's also good to

note improved feed quality and higher grades. Even by the first of August many farms had stored 10-12 quintals of feed units per standard head and are doing everything to double these reserves by the beginning of winter and to see that each animal farm is completely supplied with feed.

Increases in the production of high quality hay are a characteristic feature this year. Throughout the entire country more was prepared this year than last. For example, back in June the Baltic republics fulfilled their annual haying plan and had built up reserve stocks at all farms. Many farms will have 2-3 tons of hay and about the same amount of haylage per cow.

At the same time, in a number of rayons hay and haylage preparation are still a long ways from meeting animal needs, while a considerable share of coarse feeds are byproducts from grain growing -- straw, glumes, stubble and corn cobs. Naturally, these feeds must also be used with maximum efficiency. However, it cannot be forgotten that the greater the amount of low nutrient coarse feeds the more grain and protein are needed for nutritional balance. According to scientists' data, 10-12 kilogram average daily milk production per cow and 500-600 gram daily weight gains can be obtained with practically no concentrate supplements, if high quality coarse and succulent feeds and pasture are used. However, given the feed balance at many farms, attaining this balance requires increasing the share of concentrated feeds in the balance by three fold and more. Consequently, a decisive turnaround towards increasing the preparation of high quality hay, haylage and other coarse and succulent feeds is a genuine need for each farm.

Autumn is the time for massive ensiling of feed. In recent years kolkhozes and sovkhozes have been preparing more than 250 million tons of silage for winter. Progressive farms have worked out the optimal times for harvesting silage crops, the degree of chopping, methods of storage, packing and insulation from atmospheric oxygen, the use of various ferments and preservatives. At the same time attention should be directed towards the two basic conditions for obtaining high quality silage -- dry matter content and, consequently, total nutrient content of the ensiled material, and acceleration of the preservation process. Bacterial ferments and chemical preservatives have become more widely used. Hundreds of thousands of tons of such silage are annually ensiled at farms in Latvia, Estonia, Leningrad, Moscow and other oblasts. According to specialists' calculations each ton of such material contains an additional 30-40 feed units, 5-8 kilograms of protein and 15-20 kilograms of sugar. Increasing amounts of freshly cut, only slightly limp hay are being chemically preserved. This more completely protects all the qualities of green feed, its nutrient and vitamin composition, helping to obtain high milk yields and weight gain with minimal use of grain feeds.

In the Ukraine, the Northern Caucasus and the Central-Chernozem region extensive experience has been acquired in the storage of mixed silage, primarily for feeding swine. Ears of corn, root and tuber crops, produce and melon wastes, leguminous grass, flax and clover green chop and chaff from grain crops are used. About 2-3 tons of such silage are stored per brood sow so that during the winter it can replace up to a third and more of the concentrated feeds.

Animal raisers know well the good effect that feeding potatoes, carrots and mangel-wurzels has on dairy cows and young animals. However, as potato yields are only up to 200 quintals per hectare, it is often economically inadvisable to feed them to cattle, as it sharply increases milk production costs. Mangel-wurzels, semi-sugar beets and feed carrots have the most promise for use in dairy cattle rations. The mastery of progressive technology and collective and family contracting will make possible, even without irrigation, 600-800 quintal per hectare root crop yields, and, with irrigation up to 1,500 quintals per hectare. autumn is the most important time for supplying farms with root crops, keeping in mind not only their timely harvesting, but also conditions for their long term winter storage and the effective use of this valuable feed throughout the entire stall period.

Successful livestock wintering depends greatly upon the rational use of feeds and concerned preparations for feeding. During the 1986-1987 wintering season more than 85,000 feed facilities and shops and enterprises for preparing feed grains and various feed additives will be in operation. Experience in organizing the effective use of feeds and in full value feeding has been acquired at many farms. For example, at the Pobeda Kolkhoz in Kanevskiy Rayon, Krasnodar Kray, where there are more than 11,000 head of cattle, only prepared feeds are used. This assures high indicators. In 1986 milk yield per cow was 4,549 kilograms and 1.35 quintals of feed units were consumed for each quintal of milk.

There are highly effective feed facilities in operation at the Kolkhoz imeni Kalinin in Pervomayskiy Rayon, Crimean Oblast. They daily prepare 125 tons of mixed feeds. In the winter these include straw, root crops, ears of corn, silage, concentrates and mineral additives. At the farm there are 670 cows, with milk yields averaging 3,494 kg. The calving rate per cows was 100 calves and sector profitability was 62 percent. The feed facilities prepare rations balanced for 20 nutrients. Each day 60 tons of mixed feeds are prepared for the milking herd, cows which are beginning to produce milk and for dry cows and young animals. Prepared feed is fed four times daily.

The efficiency of concentrated feeds is increased by including grain in mixed feeds and feed mixtures, making use of local high protein feeds. Good experience in this has been acquired in Belgorod Oblast, where a unit has been set up to process whole milk substitutes and meat processing wastes, two plants for dry feed yeasts and an interfarm plant for processing vegetation collected from forests and less accessible land. This provides the farm with an additional 70,000 tons of feed units and 12,000 tons of digestible protein.

In many regions protein-vitamin additives are being produced in order to balance rations, provide full value feeds to animals, increase milk yields and weight gain and improve herd reproduction indicators. Such additives have been produced since 1985 at special installations on the Kolkhoz imeni Lenin in Novomoskovskiy Rayon, Tula Oblast and the Pobeda in Kanevskiy Rayon, Krasnodar Kray. Products from these plants are delivered to 145 kolkhozes and sovkhozes in the RSFSR.

High protein additives make it possible to completely balance the rations for highly productive cows with regard to all nutrients. At the Kolkhoz "Pamyat

Ilich" in Shelkovskiy Rayon, Moscow Oblast this has made it possible to increase milk production by 182 kg from cows averaging 4,780 kg and has raised butterfat content in milk.

Experience shows that high indicators are attained at those farms which give constant attention to improving the organization and stimulation of animal farm and complex workers' labor and which widely use moral and material incentives to increase production, reduce resource consumption and which are introducing collective contracts, two shift and two cycle work regimes.

The largest returns from resources are obtained by collectives of brigades on cost accounting and working under collective contract. In 1983 these were introduced at the Zanki Dairy Farm at the Soviet Belorussia Kolkhoz in Svislochskiy Rayon, Grodno Oblast. Compared to 1983, last year the work load per worker had increased by 39 percent, productivity increased by 684 kilograms and labor per quintal of milk declined by 2.9 person hours. At the Krasnyy Luch Sovkhoz in Shchelkovskiy Rayon, Moscow Oblast, a dairy farm collective working under contract takes care of 433 head. During 1985 each cow produced 5,590 kg of milk. Labor outlays per quintal of milk were 2 person hours while 0.9 quintals of feed units were consumed per quintal of milk.

Collective contract is very efficiently used to feed cattle at farms in Grodno and Brest oblasts in the Belorussian SSR, and in Saratov, Orenburg and a number of other oblasts in the RSFSR. At the Gigant Kolkhoz in Kuznetskiy Rayon, Penza Oblast, farm collectives are working under contract and feeding 5,300 head of young cattle annually. Production and economic indicators at the complex are steadily improving. Last year average delivery weight per animal increased compared to the previous year, and was 419 kg, labor outlays per quintal of weight gain declined to 13.5 person hours.

Rural agitators can use the Pobeda Sovkhoz in Sergiyevskiy Rayon, Kuybyshev Oblast as an example of a brigade contract's high efficiency in swine raising. The farm, which has been working by this method since 1984, annually feeds 10,000 swine. Labor payments depend upon plan fulfillment and upon savings in feeds and in other direct costs. While in 1984, prior to the transition to contract, swine daily weight gain was 401 grams, feed use per quintal of weight gain was 6.7 quintals of feed units and production costs per quintal were 113.53 rubles, in 1985 these indicators were 476 grams, 5.5 quintals of feed units and 91.93 rubles. Average payments for farm workers' labor increased by 22 percent. Collective contract brought order into swine growers' workdays and stabilized personnel turnover.

As a rule, a contract collective use progressive work regimes. In animal husbandry the five day work week has been established at 6,300 kolkhozes and sovkhozes, 4,900 farms use two shift work and 17,200 use a two cycle day.

Further improvements in work and leisure regimes for dairy workers must be made primarily through the introduction of two shift and one shift two cycle work. For many years two shifts have been used at the Imeni Vladimir Ilich and Zarya Kommunizma dairy complexes of the Petrovskoye Gosplemzavod in Moscow Oblast, where annual milk yields per cow are more than 5,500 kg.

The two-cycle day is used at most dairy farms in the Estonian SSR, where in 1985 republic wide milk yields per cow averaged 3,966 kg. In the Lithuanian SSR where this regime for cow milking is used the workday begins at 7-9 in the morning for 90 percent of animal farm workers. High productivity per cow (5,000 kg) with 2 milkings daily is attained at the Omsk Gosplemzavod in Omsk Oblast, the Kommunarka in Moscow Oblast and at other farms.

Under present conditions it is possible for almost all dairy farms to introduce progressive work regimes. However, up until now many of them used single shifts with three milkings daily. Under such a regime the workday begins at 5 am and ends at 9 or 10 pm. Workdays which are stretched out and fragmented by too many trips to and from the farm reduce the time for relaxation, household chores, educating the children and improving cultural standards. This also creates difficulties in attracting young people to dairy farms.

Progressive forms of labor organization are being only slowly introduced at kolkhozes and sovkhozes in Kursk, Orel, Pskov, Smolensk, Tambov, Ivanovo and Kalinin oblasts in the RSFSR, and in republics in the Transcaucasus and Central Asia. At almost all farms there they milk three times daily and milking herd productivity is lower than the country wide average.

It is the task of party organizations and their agitator activists to assist in introducing progressive forms for labor and leisure at all farms.

Continuous energy supply to farms is very important for successful wintering. In a number of oblasts in the RSFSR, the Ukraine, Belorussia and Kazakhstan last year there were often disruptions in electric power supplies. These sharply reduced animal productivity and caused spoilage. Boilers, heat and power lines must be repaired and backup power plants installed. Winter gives cruel tests to those who are disorganized, slow and negligent in these matters.

The intensification of animal husbandry inevitably increases the demand for highly skilled personnel. It is necessary everywhere to organize the training of farm workers in progressive methods for labor organization and payment and to take measures to strengthen farms, sending communists and Komsomol members there, and creating party groups or solidifying party organizations.

In preparing for the important winter period, rural party activists and agitators are entrusted with energetic mobilization and educational work, and in generally assisting new and progressive aspects in socialist competition to become the property of animal husbandry workers. The winter season in the first year of the 12th Five-Year Plan is an important examination for the country's animal husbandry workers. Passing it with honor is a step ahead in implementing the Country's Food Program.

11574
CSO: 1824/37

METHODS OF DETERMINING CATTLE WEIGHT ARGUED

Two Variants

Moscow EKONOMICHESKAYA GAZETA in Russian No 30, Jul 86 p 11

/Article by I. Vorobyev, Candidate of Economic Sciences and head of department at the Tselinnyy Branch of KazNIIEOSKh: "Which Variant Is Best?"/

/Text/ The organization of marketing for agricultural products is not as simple a process as it might appear at first glance. Computations have shown that on the average the expenses of kolkhozes and sovkhozes for delivering livestock to processing enterprises amount to six or more percent of the overall amount of expenditures required for the production of a quintal of meat.

A system of direct contacts is most effective for the farms and meat combines. This is not a new problem and much has been said and written about it. Nevertheless, it is still being solved very slowly. Many reasons have been cited for this: weak logistical base of the processing industry, shortage of specialized transport vehicles and a number of others.

But if we are concerned only with recording shortcomings and fail to undertake practical measures aimed at correcting them, then certainly there can be no reorganization in the interrelationships of farms and procurement specialists. Here a great deal depends upon the republic gosagroproms, oblast agro-industrial committees and RAPO's /rayon agro-industrial associations/.

There are already sovkhozes and kolkhozes in the virgin lands which are equipped with enclosures for the animals and which have the required weighing facilities, loading platforms, spur tracks and trained personnel. Here the expenses for preparing for centralized livestock shipments are quickly repaid.

The advantages are obvious when one considers that centralized shipments not only release other transport vehicles for operations, but in addition they lower labor expenditures and reduce the expenditures involved in the sale of the livestock. The lines of motor vehicles at the gates to the meat combines disappear, their idle time is reduced to a minimum, seasonal fluctuations in livestock deliveries are improved and the responsibility of the processing enterprises is increased.

But a question arises at the same time: during a given stage, which variant of centralized livestock shipments is most acceptable to the farms and

the processing enterprises? Two variants are being employed at the present time. In the case of the first variant, specialized motor transport with a representative of the meat combine, in accordance with a schedule agreed upon earlier, arrives at the farm where in the presence of its specialists the animals are weighed and a determination made as to their state of nourishment and credited weight. An appropriate document is filled out and all responsibility for delivery of the animals and for their processing and other operations is borne by the meat combines or receiving points. Under such conditions, a farm has a real opportunity to concentrate in other production sectors the labor and material resources which become available for other work.

In the case of the second variant, the animals are delivered to the receiving points accompanied by farm representatives. Initially the live weight of the livestock is determined in the presence of these representatives and thereafter, following slaughtering, the weight of the carcass. Later, in accordance with approved coefficients, the meat of the animals is converted into a credited live weight for the farms.

What is the economic essence of the variants employed for the sale of cattle. Special checks were organized. At the end of April this year, a batch of young cattle stock accompanied by a farm representative was delivered to a receiving point from Alekseyevskiy Rayon in Tselinograd Oblast. The average credited live weight for one animal was 421 kilograms. However, following slaughtering, weighing of the carcasses, determining the state of nourishment and converting back to the credited live weight for the farm, it turned out that each animal had increased in weight by 37 kilograms and 600 grams and the entire batch of cattle -- by 790 kilograms. From a value standpoint, this amounted to 1,421 rubles and 28 kopecks (all of the animals were adjudged to be in a high state of nourishment). It would appear that the time spent by the specialists in selling the animals was returned many times over to the farms in terms of material benefits and payments in kind.

Allow me to cite still another example. In early March of this year, the Makinskiy Rayon Specialized Association in Tselinograd Oblast delivered a batch of young cattle stock consisting of 100 head over a distance of 250 kilometers to a meat combine. All of the animals were considered to be in a high state of nourishment. In the case of the first variant for accepting the animals, the credited weight for one animal was 440 kilograms. For the second variant -- 466.9 kilograms.

Thus, these examples convincingly reveal why, in the first variant for selling the cattle, the processing enterprises did not experience losses in live cattle weight enroute, at the pre-slaughtering bases or during the course of subsequent technological processing. Actually, when determining the state of nourishment of an animal based upon its external appearance, a representative of a processing enterprise takes into account the shipping distance, road conditions, the possible maturation periods for the animals at the pre-slaughtering bases and other factors. And therefore it is unlikely that the indicators for evaluating the cattle will be objective. Yes and is it possible to achieve this given these conditions?

Certain conclusions arise. First of all, the norms employed for meat yields obviously require further refinements and improvements. For example, in the case of cattle, they do not take into account the pedigree structure of the animals.

Secondly, the meat sales plan should be presented to the sovkhozes and kolkhozes in dressed weight rather than in live weight. This will constantly encourage the farms to improve the fattening technology and the feeding rations.

From the Editorial Board. In publishing this article, the Editorial Board invites the leaders and specialists of kolkhozes, sovkhozes and agro-industrial associations to express their opinions concerning methods for improving the organization of livestock acceptance procedures by the processing enterprises.

Reader Follow-up

Moscow EKONOMICHESKAYA GAZETA in Russian No 45, Nov 86 p 19

/Article by S. Shnitger, Doctor of Economic Sciences: "Both the Weight and the Quality of the Meat"/

/Text/ In the article entitled "Which Variant Is Best?" (Issue No. 30 of the weekly), important problems concerned with improving the organization of cattle acceptance procedures were touched upon. Which method for accounting for the cattle is most effective -- according to live weight, determined by the procurement specialists directly on the farms, or according to the weight and quality of the meat obtain following slaughtering of the animals at the meat combines? This is not the first year that this problem has been discussed. But as yet no positive solution has been found for it.

The method for determining the volume of cattle deliveries according to live weight has many shortcomings. The fact of the matter is that live weight is subject to considerable fluctuations depending upon the strain, sex, age, degree of fattening and other characteristics. Studies conducted by the All-Union Scientific Research Institute of the Meat Industry and VIZh /All-Union Scientific Research Institute of Livestock Breeding/ have established the fact that the mistakes which occur when determining the state of nourishment of young cattle stock amount to an average of 6-7 percent. Owing to this fact, differences often arise between the suppliers and the enterprises.

The acceptance of cattle based upon the weight and quality of the meat began in the 1960's. With this method, the production operational results of livestock farms are reflected most accurately and reliability in determining the quantity and quality of the meat is raised. Moreover, a reduction takes place in the amount of time the cattle are retained on the farms prior to loading and also at the pre-slaughtering maintenance bases. In addition, the need for maintaining delivery, acceptance and weighing personnel on a staff is eliminated and many transport vehicles are released for other work.

But this method has still not been finalized. We are still encountering frequent incidents involving violations of the rules for the transporting and

slaughtering of cattle and processing of the carcasses. As a result, the volume of cattle deliveries declines and a reduction takes place in payments to the farms. A considerable shortcoming is the fact that when converting over to accounts for accepting cattle according to the weight and quality of the meat, the former system for planning and accounting for state purchases based upon live weight was retained.

At the present time, following radical reorganization of the administration for the agro-industrial complex at all levels, favorable conditions have been created for eliminating shortcomings in the organization of cattle acceptance procedures, in accounting for products and also in the relationships of farms with the processing enterprises. In this regard, I would like to offer some recommendations which, in my opinion, will aid in achieving this goal. Non-departmental control over the acceptance of livestock according to weight and quality should be organized. The transport and production documents should also ideally include the time of shipment, the amount of time the cattle are held at a meat combine, the slaughtering of the cattle and the transfer of the carcasses to refrigeration units. This information will make it possible to avoid misunderstandings in the accounts with the farms.

I do not believe there is any reason for returning to the former system of determining the cattle delivery volumes according to the live weight. Under the weighing conditions available at the kolkhozes and sovkhozes, this would serve to inflate the purchase volumes for products by 5-6 percent, which for the country as a whole would be equivalent to 1 million tons of meat annually. Such a situation can only arouse arguments and disagreements between the farm collectives and meat combines. There is another purpose behind the reorganization of the work of the agro-industrial complex -- to achieve harmonious and coordinated actions by the partners.

7026
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PRESERVING SIBERIAN TIMBER RESOURCES, FOLLOW-UP

Academician Recommends Measures

Moscow PRAVDA in Russian 16 Jul 86 p 3

[Article by A. Isayev, academician, director, Forestry and Timber Institute imeni V. N. Sukachev, Siberian Department, USSR Academy of Sciences: "The Siberian Forests: Man and Nature"]

[Text] Over half our country's reserves of mature timber are located in the expanse stretching from the Urals to Yakutia. The estimated standing timber amounts to almost 278 million cubic meters. Little more than one-third is now being used.

These figures are usually referred to when there are discussions about "the inexhaustible reserves of Siberian timber." However, one should not delude oneself with them. The better forest areas, located in the southern regions, near the Trans-Siberian Railroad, are, to a considerable extent, exhausted. In the post-war years pine stands have been reduced by almost 40 percent and there have been extensive cuttings of cedar. Large scale logging operations are moving ever north, where forests are less accessible and productive.

The situation is made more complicated by the extremely irrational use of the forest resources base. For every 1,000 cubic meters of wood logged, up to 500 cubic meters of valuable low commercial use timber is left on the stump or at felling sites. Larch is poorly uses and birch and aspen are practically unused. Large losses are allowed by USSR Minlesbumprom [Ministry of the Timber, Pulp and Paper and Wood Processing Industry] enterprises which use the conditional clear cutting method. Of course, this method makes it easier to meet plan targets, but it is incompatible with the rational use of forest resources.

In order to regulate forest use in Siberia it is very important to curtail the pilfering of forest stands by so-called "independent loggers". They account for about 20 percent of total cutting. The question is not new, but there is still no solution. The situation sometimes touches upon the absurd: Minlesbumprom counts upon logging areas allocated by USSR Gosplan. It then sets up production capacity in the new regions, builds roads and settlements.

However, when enterprises arrive it turns out that the expected stands are not there, independent loggers have cut them to pieces.

This takes place near the Bratsk Forest Industrial Complex, on the western sections of BAM [Baykal-Amur Mainline] and on areas near the Ivdel-Ob Road. In Irkutsk Oblast alone there are about 100 independent logger enterprises. Their operational standards are extremely low and production costs are two-three times higher than at Minlesbumprom enterprises.

The timber processing question is acute. Chipboard, furniture and many other wood products are hauled into the eastern regions. At the same time about 12 million cubic meters of unprocessed roundwood are annually hauled to the European part of the country and to Central Asia. Chemical and chemical-mechanical processing is lagging especially. Large forest industry complexes still do not have complete wood processing cycles. This leads to an absurd situation. There is no pulp and paper combine in the Siberian forests. Therefore huge amounts of wood wastes are not utilized, while in Bratsk whole trees are ground up because there are no wood wastes for the pulp and paper combine.

If the forest industry continues to be oriented primarily towards pine, then, even at present logging rates forest regions in the developed regions of Siberia will be logged out in 50-70 years. However, it is assumed that by the year 2000 these rates will approximately double. This time will then be reduced by 30-40 years. Consequently, we cannot avoid rebasing logging to the northern regions and using cutover pine, cedar and broadleaved forests. It is even more necessary to thoroughly process low commercial use broadleaved trees and wastes.

Every year there is an increasingly threatening gap between the large scale development of the Siberian taiga and its regrowth. Even in regions of intensive cutting, foresty outlays are only 15-20 kopecks per hectare. This is ten times lower than in the European part of the country.

Every year about 600,000 hectares of forest in Siberia are cut and about the same amount is destroyed by fire. Only about 200,000 hectares are artificially replanted. As a result, on the "boundless" areas there is a natural replacement of conifer species by low valued broadleaved ones. There are also large areas in Siberia which are not covered by forest, one third more than in the European part of the USSR.

In order to improve the use, protection and reproduction of forests in Siberia it is necessary to create an effective forest resources management system which would assure optimal paths, methods and techniques for exploitation. It is necessary to develop the theoretical and technological fundamentals of an ASU [automated management system] for forest resources. The basis for regional measures should be the forest resource regionalization of Siberia. This should be based upon ecological foundations. Our institute has done such work. Systems which include measures for the comprehensive use of forest wealth have been worked out for a number of flat and mountainous regions.

Scientific-technical progress in forest regeneration is inseparable from primary use cutting rules which determine the course of natural regeneration. Were the raw material base and forest condition permits it is advisable to reject clear cutting and to use selective cutting methods, which protect regrowth. This considerably reduces outlays for regeneration and the time needed to grow mature trees. Also, selective cutting best promotes the forest's capabilities for water retention and erosion prevention. Mountain forests and forests on permafrost require special attention in this regard.

In the years ahead it will become very necessary to develop new forest areas. Obviously, cutting large areas will cause hydrological changes. In particular, it will reduce water flow through the soil and increase the pollution of streams and rivers. This must be kept in mind when setting up forest industry enterprises. Scientific evaluations of possible hydrological changes should be taken into account when doing reclamation work. First of all, this applies to plans for transferring water from Siberian rivers and to drainage operations.

Fire protection is an extremely important problem in Siberian forests. There should be several directions in the creation of a modern fire protection system. Above all, there should be reliable methods for monitoring the pre-fire situation over large areas. The use of aerial photography has great potentials here. Forestry is waiting for help from chemistry. We need various types of substances to retard and put out fires -- to put out intensive fires, crown fires, underground and others.

In some regions harmful insects do as much damage as do fires. It is apparent that chemical methods will remain the basic means for supressing pests. In order to reduce negative consequences from their use, application methods should be carefully selected and chemical measures intelligently combined with bacteriological and viral preparations, dosages reduced by selecting proper application times. An important role here could be played by the organization of a permanent system for the earth satellite monitoring of forest health.

Forest use is still oriented primarily towards wood. However, for each ton of wood produced there is about a ton of unused organic matter -- seeds, fruits, berries, mushrooms, medicinal and industrial plants. By 1995 it is planned to complete an inventory of forest wealth in Siberia and to create the scientific basis of a service for forecasting reserves and harvests and to show the economic feasibility of their use in the national economy.

In my view, the rational use of Siberian forest resources and their environments might be helped by the reorganization of present forest enterprises into permanently operating complexes. This above all applies to cedar enterprises.

Solutions to the entire complex of problems in the rational use, protection and reproduction of Siberian forests requires well-planned, long term resource and socio-economic policies. Scientific work on this is outlined in "Forest Resources of Siberia", a program of the Siberian Department, USSR Academy of Sciences. It should be implemented by production, design and scientific institutions based upon standardized methodologies and having a deep understanding of the unity of biological and physical processes taking place

in forest ecosystems. A necessary condition for its successful implementation is its inclusion in the plan for the development of the national economy and the country as a whole.

Timber Ministry Responds

Moscow PRAVDA in Russian 10 Oct 86 p 3

[Unattributed article: "Protect the Siberian Forests"]

On 16 July 1986 PRAVDA published the article "The Siberian Forests", by Academician A. Isayev. As N. Savchenko, deputy minister, reported to the editors, Minlesbumprom read it and notes the urgent character of the problem it discusses -- abolishing independent loggers, reducing conditional clear cutting, and expanding the chemical and chemical-mechanical processing of wood.

The ministry has prepared suggestions on the concentration, by 1990, of logging and timber hauling at USSR Minlesbumprom enterprises and associations. As a result of local work, materials have been prepared on transferring to this ministry logging enterprises in other ministries and departments with total annual logging volume of 7.9 million cubic meters. The question is now being examined at USSR Gosplan.

In the article it was accurately noted that forest areas located in the southern regions of Siberia and near the Trans-Siberian Railroad have, to a considerable degree, already been cut over. The ministry is taking measures to bring order into forest use in these areas. Recutting of logging sites, with the exception of a few leskhozy [state [nonindustry] forests], has been curtailed. Most of the logging enterprises in this territory have been converted to long term use. Simultaneously, work is being done to organize permanently operating comprehensive forest enterprises for forest reproduction, logging and the complete processing of wood. They have been set up in Krasnodar Kray and Irkutsk and Tomsk oblasts.

Ministry enterprises in Siberia have not been given 1986-1990 targets for conditional clear cutting. Tree planting and reforestration work should grow 1.5 fold.

The chemical and chemical-mechanical processing of wood in Siberia is lagging. In recent years the ministry has taken measures to creat processing operations in the region. Their implementation will considerably expand wood and wood waste use in Siberia.

The ministry supports the proposal to prepare the program "Forest Resources of Siberia" and will participate in its elaboration and implementation.

11574
CSO: 1824/38

IZVESTIYA INVESTIGATES UNSATISFIED DEMAND FOR FOOTWEAR

Moscow IZVESTIYA in Russian 10 Oct 86 p 2

[Article written by an investigative team consisting of S. Bablumyan, A. Yershov, A. Kleva, V. Kulagin, S. Plotnikov and V. Romanyuk: "Seasonal Footwear"]

> [Excerpts] When we renew our wardrobe for autumn, we try to select footwear fit for the season. We want it to be fashionable, light, and warm, offering protection against slush and mire. However, the more autumn comes into its own, the greater the number of letters received by the editors in which the writers use colorful language to give vent to their annoyance at the fall merchandise offered for sale. Our consumer team also went looking for seasonal footwear.

"I think that one of the hardest things to do is to try to feed a person whose stomach is full," said bluntly M. Zaytsev, chief engineer of the Kursk Footwear Production Association. "Nowadays, instead of buying goods that are essential, people are more concerned with fashion."

We entered the children's footwear department. Customers were scarce there.

"There is nothing to buy," moaned P. Petrova, an economist who works in a local enterprise. "I have spent several days looking for boots for my grandson. I cannot find anything suitable."

L. Yakovleva, manager of the children's footwear department, was not able to help the despairing female customers.

"The Kursk footwear manufacturers have started to produce beautiful laced chrome leather upper boots with lining," she said. "They are handsome and comfortable and come in various colors. They are in great demand, but we could sell twice as many if we had them. In the case of girls' fall slippers and shoes for school -- alas! -- there are none. We are forced to have them shipped in from Rostov Oblast."

As you can see, the problems are the same as those the Moscow women have. On

that day many customers left the factory outlet empty-handed. But what about shoes for older people? We were told that the footwear manufacturers started to produce five styles of inexpensive fall slippers. But the amounts were pitifully small. On the other hand, counters were full of more expensive shoes.

Yes, customers are shopping for attractive, fashionable and relatively inexpensive footwear. A great deal of the trouble is due to low quality of raw materials and accessories. Local footwear manufacturers recently developed a style of women's cuffed boots, operating on the assumption that especially soft leather will be available. The art council rated the boots at 39 points out of a possible 40. However, the Kursk tanners supplied leather that was tough and coarse. We saw the experimental model and, so to speak, the store variety. It was a difference of night and day.

In Kharkov we headed directly for Store No. 15, which is located on crowded Moskovskiy Prospekt. This is the only footwear association outlet in the city. On the previous day activists from consumer headquarters visited eight specialty stores, including the House of Trade, and saw poor selections of impractical footwear: the fall and winter footwear offering consisted of unlined rubber boots, felt low-cut shoes and women's suede boots. We had been given to understand that Store No. 15 was fully stocked.

"Judging from our accomplishment of the financial plan, we are getting along fairly well," explained deputy director N. Skrebets. "But we are able to do this on the basis of sales of bedroom slippers, not of fall footwear."

Our mood improved somewhat in Gorky. The local footwear association started to produce new styles of fall shoes already in the end of July. They were successful for the first time in producing children's low-cut shoes with molded sole. Another new product was women's high-top shoes with two-color sole which are elegant and fully reflect the present fashion.

"This is a youthful style," said association chief engineer G. Berberyan. "Unfortunately, we were able to produce only 10,000 pairs. We had to close production due to unavailability of imported soles."

The Gorky Leather Association manufactures a narrow line of leather goods, usually black in color. The footwear makers are in favor of levying fines on those producing raw materials of low quality. However, they themselves pay fines, and at full cost of the footwear at that.

The last place we will report on is the Urals, where autumn was in full force. Sverdlovsk Store No. 35 received two lots of women's fall boots made by Uralobuv, the local association. This article is very popular for wear during the Ural autumn, especially since there are problems associated with fall footwear in the city. However, the quality of the item turned out to be disappointingly poor.

"We had to reject 80 pairs out of the 150 pairs in the first lot," said store manager A. Starkova. "Of the 160 pairs in the second lot, 132 were unsuitable."

We assumed that we could phone the association and be told immediately the names of those guilty and the causes of the defective merchandise. However, we found that Ya. Kapstan, acting chief engineer of the Uralobuv association, was not knowledgeable on such a "minor" problem. He shuffled us onto L. Kuznetsova, his deputy for production. She advised us that only Ya. Brodetskiy, the quality control chief, could provide information on individual product lots. Judging from all this "shuffling", one thing became clear: no one considered this occurrence in Store No. 35 to be unusual. The reference to the "minor" affair was not relevant to the situation, though only 70 per cent of the entire footwear output is saleable due to poor quality.

Specialists with whom we discussed this problem suggested that the material welfare of manufacturers be made directly dependent upon the amount of success enjoyed in sales of their footwear, fabrics and clothing. Then customers will have available to them the items they need, in the right season and in sufficiently large selections. Briefly speaking, the economic mechanism proper should effectively protect the interests of millions of Soviet people.

13005
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ELECTRIC POWER GENERATION

ERECTION OF SHULBINSKAYA GES BEHIND SCHEDULE

Alma-Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 9, Sep 86 pp 9-12

[Article by A. Korikov: "The Shulbinskaya GES: Acceleration Is Required"]

[Text] "Complete the Erection of the Shulbinskaya GES." (This is from the "Main Directions for the Economic and Social Development of the USSR in 1986-1990 and During the Period up to the Year 2000")

The first phase of the Shulbinskaya GES, which is being built at a budget-estimated cost of 272 million rubles, including 174 million rubles of SMR [construction and installing work] and has a designed capacity of 702,000 kW, opens up a new--the third--stage of the Irtysh cascade of hydraulic-engineering complexes. With introduction of the second phase, by building up the dam and bringing the reservoir's capacity up to 12.7 km^3, and also with erection of the counterregulating Semipalatinsk GES, the capacity of the republic's power system will be increased by 2 million kW.

This not only will permit elimination of the power shortage in Kazakhstan's east, especially during peak-load hours, but it will also enable operation of the whole Irtysh cascade of GES's to be stabilized and the filling of the Bukhtarminskoye reservoir to be speeded up. The water supply for consumers will be improved, from Zaysan to Omsk, and 350,000 hectares of new lands will be irigated.

The Construction Administration of IrtyshGESstroy [Trust for the Erection of Irtysh Hydroelectric Power Stations] of the All-Union construction and installing association Soyuzgidroenergostroy [All-Union Association for the Construction of Hydroelectric-Power Facilities] of USSR Minenergo [Ministry of Power and Electrification] is erecting the Shulbinskaya GES.

In 1986 the builders, installers and setting-up workers face the task of spanning the Irtysh by 15 October and of starting up the first power unit, of 117,000 kW capacity, in December.

Our correspondent visited the Shulbinskaya GES, which is under construction. We are publishing his article.

A. S. Izotov, chief of the Production Section of IrtyshGESstroy's US [Construction Administration], is acquainting me with the facilities of the republic's most important power-engineering construction project.

According to the design, which was prepared by the Kazakh Branch of Gidroproyekt [All-Union Survey, Design and Scientific-Research Institute imeni S. Ya. Zhuk], the standard period for erecting the Shulbinskaya Hydroelectric-Power Station was 7 years. In 1976 the contractor began construction and installing work at the complex. The brigades were concentrated in three main areas: for construction of the workers' settlement and the construction-industry base facilities and for erection of elements of the future GES. One can judge the pace of the contractors' work and the results achieved by some figures. As of 1 July 1986, that is, after 9 years, the builders had erected at the Shulbinsk settlement 91,000 m^2 of housing (the design required 99,000 m^2) and had turned over for operation a number of facilities for nonindustrial purposes--an intermediate school, 2 kindergartens, 4 dining rooms, a hospital, a cinema, a bathhouse and laundry combine, some stores, a bakery, a communications center and other facilities.

The facilities for the industrial base were erected much more slowly. About 30 out of 40 facilities have been completed and turned over for operation.

Construction and installing work directly at the GES construction site also was performed with a great lag behind the construction schedule. The standard period was exceeded 1.5-fold to 2-fold for digging out the hydroelectric power station's foundation pit and the bypass canal, filling the temporary dam, and concreting the apron plate and the wall supports. And although the GES's dam was erected up to the 224-meter level (the starting grade was 230 meters), allowing Soyuzspetsgidromontazh [All-Union Trust for the Erection of Special Hydraulic-Engineering Complex Facilities] subunits to perform consolidated assembly of the stator of the first hydropower unit, the delay proved to be so great that spanning of the Irtysh, which was planned for 15 October, and startup of the first power unit in December are debatable.

In order to meet the planned deadline and to activate the first hydropower generator, the builders must double the pace of construction and installing at the complex as a whole, and even triple it for concrete operations, before the end of this year. The brigades should place practically up to 1,000 m^3 of hydraulic-engineering concrete per day and, correspondingly, 30,000 m^3 per month. At the start of the year they should lay, on the average, 300-350 m^3/day. In June they reached the average daily indicator of 450 m^3. Although, as we see, they increased the pace, they did not achieve the required acceleration.

Such results of the work of IrtyshGESstroy's construction administration are not accidental. The pace at which SMR was performed was low from the very start. As a result, the assimilation of only 85.6 million rubles, or 49 percent of the worked called for by the design, was managed during the Ninth Five-Year Plan. Only once did the collective cope with the annual plan task--in 1983.

The collective worked especially unsuccessfully at the finish of the 11th Five-Year Plan. In 1984, under a plan for 20.5 million rubles of SMR, it had assimilated 7.1 million rubles, or 34 percent. In 1985, 8.8 million rubles, or 62 percent, were assimilated instead of 14.2 million.

For a number of years an especially great lag was observed in the manufacture of monolithic structures for the GES. While the parts that were simplest, technically speaking--the dam's foundation, the supports, and other items that required uniform concretes--were being erected, the contracting brigades achieved a high output per person here, provided, naturally, that they were supplied with everything that was necessary--concrete, crane equipment and the formwork. It turned out that the Shulbinsk hydraulic-engineering builders did not have enough of either the first, the second, or the third....

Persistent interruption of the construction plan led the contractor into serious financial difficulties. Millions of rubles in losses, an insufficiency of working capital, and a lack of material incentive funds--this is a far from complete list of the results of unsatisfactory work by the IrtyshGESstroy US collective.

One cannot help but also note this sad fact: skilled blue-collar workers, engineers and technicians began to desert the "take-your-time construction administration." In essence, every 2 years the makeup of the hydropower builders at Shulbinsk turned over.

Why has the mandated construction proved to be in such a critical situation, and who is to blame?

"Don't look outside for the guilty parties," says IrtyshGESstroy US's chief, Yu. M. Panfilov. "There are no claims against the designers or suppliers of hydraulic-engineering equipment: the technical papers have been refined responsively, and designers' surveillance is being conducted; and all equipment necessary for the first hydropower unit was delivered to the site back in 1984. We ourselves are to blame for the lag: we did not manage to develop the construction base in timely fashion."

Weakness of the support system was one of the main causes of poor work by the contractor. Each year, for example, the construction project suffocates from a shortage of hydraulic-engineering concrete, the concrete-mixing unit was completely worn out, and a new automated concrete plant was put into operation only in April 1986, after a delay of several years. It was introduced under a temporary control scheme in a greatly unfinished state.

Here is what concrete-plant chief N. M. Senognoyev says about this:

"It took us several months to eliminate the builders' deficiencies, to outfit the new enterprise with KIP's [measuring instrument sets] and to convert it to the automated operating mode. However, it still has not come up to the designed capacity: the gravel-grading unit (GSKh), which also was turned over for operation in a greatly unfinished state and cannot support concrete production with crushed aggregate, is letting us down: four fractions are needed but only three are produced."

The contractor is also behind in developing other construction-industry enterprises. Thus, it is planned to put industrial-base facilities--the mechanization, hydraulic-equipment assembly, hydropower-equipment and formwork shops--into service and to expand the reinforcements and other shops only in t second half of 1986. This means that their output will not be complete in the year that the first hydraulic unit is to be started up.

But even those industrial-base facilities that are turned over for operation cannot operate at full steam today--there are not enough equipment and specialists.

S. A. Bezborodov, leader of an advanced brigade of lathe operators of the construction-mechanization administration, said worriedly in our conversation:

"The turning shop lacks eight metalworking machines. We are not coping with orders because of this. We basically do emergency work...."

The situation is no better in providing the general contractor's other departments with operating equipment. In the equipment division of IrtyshGESstroy's US I was told that more than 200 units of equipment had not been received by construction-industry enterprises by 1 January 1986. Including mobile technical servicing units, without which, as N. S. Simonenko, chief engineer of the UMS [Construction Mechanization Administration], considers, it is difficult to support round-the-clock and uninterrupted operation of cranes, compressors and other equipment at the job sites.

There are not enough concrete and reinforced-concrete modules and panels, reinforcement modules and formwork at the project....

Why did strengthening of IrtyshGESstroy's US turn out so badly?

For elucidation I turned to V. A. Shramkov, deputy production chief of VSMO Soyuzgidroenergostroy [All-Union Construction and Installing Association for the Construction of Power-Engineering Facilities], which superintends the construction project at Shulbinsk.

"The construction-industry base of IrtyshGESstroy's Construction Administration," he says, "is being erected under the project title of the Shulbinskaya GES through funds allocated for temporary buildings and structures. These funds proved to be inadequate. The situation is worsened also by the fact that we must also use the base to service other new construction projects, particularly to supply materials and structure to the Semipalatinsk TETs-3, which is under construction. There is not enough capacity, of course, because it is poorly developed. Both the association and IrtyshGESstroy's US are to blame for the fact that some of the facilities are being built slowly and go into operation after much delay--they are not paying enough attention to its development. We are doing everything to insure that construction-base enterprises will be able to operate normally by the end of the year and support the program for the complex due for early startup. The necessary equipment, specialists, crane equipment and transporting resources will be sent to Shulbinsk."

What has been said by the responsible supervisor of VSMO Soyuzgidroenergostroy requires comment.

V. A. Shramkov recognizes the fact that the contractor's construction-industry base is being built as the association pleases and it is not being financed and supplied as the circumstances dictate. Did not the VSMO's administration know 9 years ago that IrtyshGESstroy's Construction Administration was to erect not just the Shulbinskaya GES but also other hydraulic-engineering structures in Kazakhstan? Indeed, it not only planned the work of its contracting subunit for the five-year period but it also signed the design tasks for such facilities as the Semipalatinsk counterregulating GES, Semipalatinskaya TETs No 3, and other jobs. Today IrtyshGESstroy's US actually sends half of its resources to other construction projects, and this means that its base performs a regional function.

If the VSMO manager knew all this previously, then the natural question arises: why was the base's status not reexamined simultaneously and not allocated enough resources for its development? What was it--a chance miscalculation?

But what can explain another circumstance that the construction project would like to forget today?

The All-Union Construction and Installing Association Soyuzgidroenergostroy has already tried once (on paper) to put the first hydropower unit into operation. This was written in the plan of IrtyshGESstroy's US for 1984. But nothing came of this: neither the builders nor the construction-industry base was ready for such a spurt.

This case testifies not simply about exceptional miscalculations by the VSMO management but in general about a style of managing construction that is difficult to recognize as being a model one.

Were the necessary lessons learned from the spanning of the Irtysh and the startup of the first hydropower unit in 1984, which did not occur? Experience has shown that it did not. It would seem that in our day, when acceleration has become a universal slogan, it is forbidden to work this way.

The restructuring that is going on in all spheres of life requires that economic managers of contracting organizations overcome inertia and reject unsuitable methods for managing construction work.

In order to carry out the tasks set by the 27th CPSU Congress about halving the time taken to erect facilities, it is necessary today not only to concentrate capital investment on the most important construction projects but also to carefully balance plans for capital operations with the potential of the contracting collectives and the capacity of their construction bases and to use intensive-type factors for accelerating the execution of SMR.

However, judging by everything, the managers of the VSMO and of IrtyshGESstroy's US were not in too much of a hurry to be reorganized. The VSMO, for example, had planned that the Shulbinskers would do 17.6 million rubles' worth of CMR in 1986, or double what they did last year. But it is not clear what means it proposed to use to achieve this acceleration, when it was

clearly known that the construction support was not ready. Through technical progress? But it was clear to all that even advanced equipment will prove impotent if the assembly line--the construction-industry enterprises, transport, and the construction brigades at the construction project--is not operating with precision.

The builders became graphically convinced of this when they tried to speed up concrete placement by means of the newest Super-Swinger machines, which had been purchased abroad for gold and whose productivity is as much as 180 m^3/hr of concrete. Because the concrete plant did not come up to its designed operating level, the imported machine's workload capability was being used by only one-third. Thus, even to this day, this advanced equipment is operating at half strength.

Moreover, I saw the order of one of the USSR Deputy Ministers of Power and Electrification to the effect that still another Super-Swinger machine was being sent to Shulbinsk, although the problem with the concrete has not been finally resolved. In July, for example, the concrete plant fell short of deliveries to GES facilities by more than 10,000 tons of hydraulic-engineering concrete.

Inexpert use of the new equipment is an indicator of poor management of the construction process. Clearly, they were not prepared here for an intensification of production and for the acceleration.

"The structure is complicated," says A. S. Izotov, "so formwork of various configurations and sizes and different grades of hydraulic-engineering concrete is required. We badly need cranes of small capacity. We are short more than 10 of them. With the help of this equipment we could increase the maneuverability of the construction brigades and raise their output per worker. The construction project is also lacking other machinery--concrete pumps, vibrators, welding sets and trucks."

Only at the end of June 1986 did VSMO and USSR Minenergo examine the question of ensuring startup of the Shulbinskaya GRES's first power unit. Then the decision was made to deliver to the Shulbinskers six cranes of various lifting capacities, concrete pumps, vibrators, trucks and welding and other equipment.

Let us note that this was only a decision. It still remains to be carried out. And this is not simple. In no small measure because performance discipline in the staff of the branch and of the VSMO and its subunits is not high. Thus, at the start of the year USSR Minenergo ordered the association to send 1,000 hydraulic-engineering construction workers to Shulbinsk from other construction projects. However, many construction subunits in the field did not obey the order. In particular, Naryngidroenergostroy [Naryn Trust for the Construction of Hydroelectric Power Facilities] simply failed to send the Shulbinskaya GES 100 workers, Tadzhikgidroenergostroy [Tajik Trust for the Construction of Hydroelectric Power Facilities] failed to send 150, Soyuzgidromontazh [All-Union Trust for the Installation of Hydraulic-Engineering Equipment failed to send 150, and so on. In brief, this decision failed completely to be realized: there is constantly a shortage of hydraulic-engineering builders at the construction project.

As we see, little has been done to speed up capital operations for the GES that is under construction. Neither Minenergo nor the VSMO nor the construction-project staff has managed to organize affairs in such a way that existing reserves are used to the maximum. As shown by workday photography that was taken in the first quarter of 1986, worktime losses at the hydraulic engineering complex's facilities averaged 8.6 percent, including losses from lack of motor-vehicle transport and of cranes--1.7 percent, shortages of materials--2.4 percent. The norms for output per worker were not met by one-third for blue-collar workers.

The construction project is converting slowly to effective forms for organizing the work, primarily to the brigade and the start-to-finish flowline contracts. This work has not been of a planned nature, and formalism prevails.

"Since the first of April 1986 we have formally transferred to the brigade contract, but an agreement with the administration of the construction administration has not been signed," say workers of V. V. Kirin's integrated consolidated brigade of ShulbinskGESstroy's US. It refused to guarantee the delivery of building materials. What kind of a contract is it without guarantees? Idle time in the brigade through the fault of the materials-supplying service is not a rarity."

Several complexes where tens of brigades of the general contractor and his allied organizations are busy are being erected simultaneously at the Shulbinskaya GES. However, nowhere is work being done to initiate the start-to-finish flowline contract, although everyone knows that this is the most effective way of organizing the work. Moreover, the socialist commitments of the collective of IrtyshGESstroy's US for 1986 state: do 25 percent of the SMR by this method. Everything remained on paper.

Chief of the IrtyshGESstroy Construction Administration Yu. M. Panfilov and Chief Engineer V. A. Ryzhov have tried to get out of this work, although they are committed to setting an example of a thoughtful organizational approach to introducing the brigade contract.

It is not surprising that the coordination council created a year ago is inactive, and the sections, including the work and pay section, which is under G. K. Petrosova, are working without initiative and do not show the necessary persistence when the matter touches introduction of brigade and start-to-finish flowline contracts. Out of the administration's 56 brigades that are engaged in construction and installing work, only 4 have converted to the contract. And they, as has been explained, have done so formalistically.

All this testifies to the fact that key changes in managing the construction process still have not been achieved here.

Conversion to intensive methods of operation is still going on too slowly. They try to reach new marks at the construction project, not with skill but with numbers.

It is time to realize that such a course will not provide for a genuinely sharp change in affairs at this important construction project. Only a

radical improvement in the work style and methods in all elements of the construction administration, genuine resolve by the branch's staff to solve the problems of completely supplying the construction-industry enterprises of the IrtyshGESstroy's US with equipment and machinery, augmentation of the collective with personnel, and the creation of normal housing and living conditions for the people will enable the general contractor to pick up the required acceleration.

The builders' tasks this year are not simple. But there is no place to fall back. The first power unit should generate current in December. In the months remaining before startup, working collectives of the hydraulic-engineering builders are to pick up the pace. Especially in concrete operations. In order to eliminate the lag here, about 30,000 additional cubic meters of monolithic structure must be produced. The hydraulic-engineering construction workers have not exhausted their reserves for accelerating this work. Restructuring must be performed on the go--make final adjustments on the construction assembly line, eliminate worktime losses, use intensive operating methods more widely, and energize the human factor more completely. These are the components for success, the bases for highly productive and steady operation, not only at the end of the year but also in the ensuing years of the five-year plan.

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ECONOMIST ANALYZES WAGE CORRELATION, LABOR OUTPUT

Moscow EKONOMICHESKAYA GAZETA in Russian No 40, Oct 86 pp 6-7

[Article by N. Rimashevskaya, doctor of economic sciences: "Distribution and Justice"]

[Text] Distribution and justice or a just distribution is a pivotal socioeconomic, urgent political, and important moral and ethical problem.

Wages and Equality

The consistent implementation of socialist distribution principles invariably takes on a political tinge, particularly under the influence of the fact that in literature and in the resolution of practical issues, the economic function is contrasted with the social function which supposedly requires total equality and is equated with just distribution. It is considered that the solution of economic problems inevitably leads of economic inequality and that the solution of social problems requires this selfsame equality. Such a formulation is unquestionably the result of an erroneous, distorted understanding of justice (in the economic sense) under socialism.

The realization of the principles of just distribution poses moral and ethical problems. If, for example, a young person full of vim and vigor wants to earn money (not by any means in the spirit of getting more and giving less), to make his appropriate contribution to the common kettle (to work more intensively, to work one and one-half shifts, to work more than one job, etc.), how should his wishes be evaluated from a moral and ethical standpoint? All manner of different answers to this question may be heard.

The correct theoretical and practical resolution of the problem is in general hindered by the variant readings that exist to this very day despite the fact that the 27th Party Congress formulated clear and definite positions regarding the essence, tasks and functions of distributive relationships and the concept of justice under socialism. The concept of just distribution is not by any means understood to be the same thing by different people in both everyday and scientific parlance.

One position (we will call it the position of extreme justice) is that there should not be significant differences in wages, income and consumption under

socialism. Such differences are a violation of social justice. They prevent the consolidation of society and its movement toward social homogeneity. As if it were possible to attain the social homogeneity of society before overcoming substantial differences in labor and production. To phrase it simply, advocates of this point of view proceed from the premise that "through righteous labor you will not receive a palace of stone."

To a considerable degree, this position is the consequence of an incorrect, primitive understanding of equality and social justice under socialism and especially equality in consumption. Equality under socialism, however, is equality vis-a-vis the means of production, the equal right of everyone to work according to their ability and to be rewarded according to their labor.

Social justice under socialism is above all the equal opportunity of everyone to realize their abilities on the basis of the constitutionally guaranteed right to education, work, health care, and housing. As emphasized at the 27th CPSU Congress, the essence of social justice of the new social order consists in the basic principle of socialism: "From each according to his abilities, to each according to his labor." The consumption level of every member of socialist society in general is formed primarily as a result of his labor. But since labor is qualitatively heterogeneous, it is inevitable that its results cannot be the same. What is more, there should be no equality of consumption. Moreover, there are substantial differences in people's needs, orientations, aims, and preferences.

The second position is that differences in pay today are extremely small, that wages are still characterized by leveling tendencies. But there will be more detailed discussion of this point below.

The Main Principle of Distribution

A one- and two-way connection exists between the two aspects of this principle: "to work according to one's abilities" and "to receive according to one's labor." Only when the labor principle of distribution is realized everywhere can it be expected that the maximum number of workers will apply their abilities to the fullest.

This principle is closely linked to the economic functions that are performed by wages. They act as a form of distribution of the bulk of consumer goods on the one hand and as the principal incentive for effective, highly productive labor on the other. The most important feature of the distribution principle is the strict demand that correlations in the remuneration of labor be directly proportional in labor and in its results. Only then will the labor principle fulfill its stimulating function by ensuring feedback between [people's] well-being and social production.

In order for wages to perform their stimulating functions, there must be appreciable differentiation in the remuneration for labor of different quantity, quality, productivity, and effectiveness. With the given minimum wage (the amount of earnings that society guarantees every worker for conscientious but least-skilled labor), the average wage depends on distinctions in labor, which ultimately determines the necessary wage fund.

At the same time, today one can still see clear trends toward wage leveling which dates back to the late 60's, when discrepancies were noted in the growth rates of the minimum and average wage (under the 8th Five-Year Plan, the minimum wage rose by 50 percent while the average wage increased by only 26 percent). This meant that the increase in the minimum wage was not accompanied by a corresponding increase in the earnings of blue- and white-collars in the middle and high income brackets and hence invariably resulted in reduced differentiation.

This does not mean that the minimum wage should not rise from one five-year plan to the next. To the contrary, the objective regularity of the growth of the minimum wage together with (and in proportion to) the overall betterment of the people's well-being should be emphasized. What is more, the minimum wage grows regardless of decisions by the state on this question.

The level of wage differentiation can be judged according to the coefficient that reflects the correlation of earnings of the highest-paid 10 percent and lowest-paid 10 percent of blue- and white-collar workers. According to our research data, this coefficient is 3.3 to 3.4 for the national economy in general and approximately 3 in industry. Such a level of differentiation is clearly insufficient given the substantial distinctions in labor and the high share of semiskilled, manual labor.

Wage leveling is pleasing only to those who want to get more money for less work. Leveling is to the liking of the loafers and slipshod workers, but is unquestionably detrimental to good, conscientious, front-rank workers.

The growth of wages regardless of actual performance not only violates the stimulating function of distribution according to labor, but ultimately does not promote the betterment of [the people's] well-being since it does not result in output equivalent to money paid out in wages.

The essence of leveling and its source consist specifically in the fact that there is a gap between wages and the level of production, particularly the level of production of goods and services. The discrepancy in the dynamics of wages and the production of marketable goods and services is typical of all categories in the work force. This is also the reason why people may be paid merely for showing up for work, why there are unjustifiable distinctions in wages because of the practice of giving in to those "who have the loudest voice."

Under present conditions, the correspondence of wages to the socially acknowledged results of labor is the most important task in increasing the effectiveness of social production and in raising the population's living standard on that basis.

Leveling--The Antipode of Justice

Under our conditions, it is very easy and simple to reduce distinctions in wages, but it is immeasurably more difficult to break this trend. To a considerable degree, this is the result of the centralized management of wages, the shortage of least-skilled workers, and the use of higher earnings

as a means of redistributing manpower. Therefore, if we examine the content of economic processes in the distribution area, we will find that differences in wages have basically increased as a result of the following factors.

First--on the basis of an increase in the minimum wage and rates of workers in middle income brackets at different times in individual branches and regions, in the productive and nonproductive sphere, in the European part of the country, and in the eastern and northern regions. Second--a more rapid growth of interbranch wage distinctions in accordance with the system of economic priorities. And third--an intensive increase in the wages of the least- versus the highest-skilled workers. This phenomenon could be called "differentiation in reverse." Banal confirmation of this point is provided by the fact that a bus driver today earns as much as a university professor. Statistically, however, workers earn 114 percent of the average wage; specialists with higher education--98 percent.

The highest incidence of wage leveling due to the insufficient differentiation of wages on the basis of performance is found among middle-income workers. The tendency toward wage leveling here is fed by existing stereotypes in economic thought. During M. S. Gorbachev's meeting with Krasnodar Kray working people, he stated that everything we have adopted on the basis of the Leningrad experiment (in which things went well) was applied in such a way that engineers and technicians were given a raise of 5-7 rubles. This is wrong.

We have many trained engineers, but their performance is below par. Engineers should be given incentives appropriate to their performance.

In the economic literature, there is even the thesis that wages today are losing their force as a stimulus; that the prestige of an occupation, working and living conditions, ecology, and climate are now the most important considerations. Moreover, this situation is regarded as positive. In our view, this is by no means the case.

What are the dangers presented by the economic "devaluation" of wages? First, wages are the basic form for distribution of consumer goods; they account for approximately 70 percent of their total volume. This is the principal social instrument for determining the correspondence of labor and consumption. And if the pay is the same for good or poor performance, we lose the potential for using the human factor effectively.

Second, weakening of the stimulating function of wages results from the poor organization of wages on the one hand and the still-persisting imbalance between the population's effective demand and the supply of goods and services on the other. Under these conditions, a ruble in wages does not have the proper stimulating force because of the lack of goods and services of the appropriate quality to spend it on.

Third, under the conditions of full employment, the result of lowering the stimulating role of wages is that earnings become a reward for merely showing up for work. It becomes necessary to establish many different types of additional payments for effective, quality labor. There was even an

experiment that was designed to show that various kinds of scarce goods and services are more effective work incentives than wages. But if we follow this logic, we should increase rather than eliminate the scarcity. The absurdity of such a formulation of the question is obvious.

The 27th CPSU Congress formulated a number of demands on the regulation of wages, the implementation of which should promote change in the existing trends. They include, above all: the fight against wage leveling in any form; the all-round increase in the material interest of workers in the results of their labor; oversight over the correspondence between labor and consumption; and the inadmissibility of skimming [vyvodilovka], of paying wages that have not been earned, and of awarding bonuses that are not deserved. Everyone must be fully aware of the real dependence between material rewards and their actual contribution.

The recently adopted decree of the CPSU Central Committee, USSR Council of Ministers, and AUCCTU on improving the organization of wages and the introduction of new wage rates and salaries for workers in productive branches of the national economy emphasizes in particular that this work must become an integral part of the introduction of the new economic mechanism, full cost accounting, and self-financing. It is envisaged that wage rates and salaries of personnel of associations, enterprises and organizations shall be raised on a fundamentally new basis--as a result of improvements in the economic activity of work collectives and their earnings rather than budget sources.

Differences in wages must be more closely connected to the results of labor and its effectiveness. If a person has the desire and ability to work more effectively, if he tries to upgrade his mastery and skills, and if he is prepared to give society a greater quantity of labor without regard to his free time, there should be no restrictions on his wages.

However, the correlation in wages only basically determines the correlation in consumption. They are separated by a "great distance" that includes a number of stages of redistribution.

Aggregate Family Income

First of all, the earnings of workers, combined with the incomes of other family members and dependents, are transformed into aggregate family income per family member. Strictly speaking, it ultimately also determines the family's purchasing power and its potential to buy food, clothing, footwear, consumer durables, and means of transport. It is obvious that variations in incomes differ substantially from variations in wages and depend on disparities in the structure and makeup of families. The result would seem to be an obvious injustice. But this is injustice that is inevitable under socialism--the first phase of the communist formation. As V. I. Lenin noted, this injustice exists because consumer goods are distributed according to people's labor and not according to their needs. "However, individuals are not equal: some are stronger, others are weaker; some are married, others are not; some have many children, some have few children, and so on."

Society uses payments and benefits from the social consumption funds to care for those who are unable to work and assumes some of the cost of maintaining children, substantially but not entirely reducing this injustice. It cannot be otherwise because distribution based on need is possible only in the highest stage of the communist formation.

Differences in the purchasing power of individual families also depend substantially on two more circumstances. First, on the volume of consumer goods that a family receives free of charge or at a reduced rate. Indeed, the fact that a family receives an apartment from the state fund free of charge or acquires an apartment on a cooperative basis cannot fail to be reflected in the family budget.

Second, it is also necessary to take into account various kinds of miscellaneous family income that form both as a result of the direct exchange of activity between individual citizens, additional income resulting from labor that is not taken into account, and other lawful income (inheritance, help from relatives, interest on cash savings) as well as income from unlawful actions (theft, speculation, bribes). Unlawful unearned income is an especially intolerable form of injustice. The intent of the nationwide fight against unearned income is to close all channels and sources of injustice in the distribution or redistribution of material and nonmaterial goods.

The Functions of Social Funds

The population receives approximately 30 percent of the total volume of consumer goods from social consumption funds that are primarily intended to fulfill social functions, to contribute to the material support of those who are not able to work, and to provide equal access to consumer goods that satisfy the socially meaningful needs of every citizen in society.

At the same time, for a number of reasons differences have developed in the provision for children's institutions, state housing, and other goods. Differentiation results not only from social and historical causes, but also from the still existing departmental approach to the use of social consumption funds. Under these conditions, it is necessary to strive for their more uniform distribution.

The question naturally arises: how then should we view and evaluate the sociocultural funds of enterprises that form as a result of the distribution of profits and that extend only to the personnel of these enterprises and their families? To our way of thinking, they cannot be regarded as social consumption funds in pure form even though they have some of the external features of the latter in that satisfy predominantly socially acquired needs (for housing, for children's institutions, for the organization of recreational and health care facilities).

First, these funds have been earned by the personnel at a specific enterprise which also makes them available, that is, there is a certain element of the labor equivalent in distribution. Second, the enterprise collective itself determines directions for the utilization of these goods. Third, the share of each person and the specific receivers of goods from enterprise funds are

established according to the workers' contribution to the final labor result. Fourth, the level of satisfaction of final needs on the basis of the indicated funds may be substantially higher than the state norms. Thus, meals in the workers' cafeteria are free, personal services are available free of charge or at a reduced rate, and transportation is free at a number of enterprises and organizations whose performance is especially effective.

Under such conditions, enterprise sociocultural funds have a clearly labor-based form of distribution which promotes predominantly collective forms of consumption. Those who contribute more to the enterprise's common success also receive more. These funds are in actuality a means for encouraging skilled, conscientious labor.

Regarding the improvement in distributing consumer goods from social funds, we believe that in order for them to fulfill their functions optimally while affirming social justice, they [social funds] should be made available to the population in accordance with certain socioeconomic norms and social guarantees. They must reflect the consumption of these goods in such amounts that society can guarantee equal accessibility to one and all at every given stage. The volume of consumer goods that satisfies priority needs at the level of socially-guaranteed norms also comprises the social consumption funds. In this case they realize a just distribution, not increasing differences in consumption, but preserving them at a level that corresponds to distinctions in labor.

Strengthening the principle of social justice is only possible through the all-round improvement in distribution relationships and distribution mechanisms intended to perform their economic and social functions. And this requires the realization of certain correlations in accumulation and consumption, in the wage fund and social funds that objectively generate differences in the payment of wages, an internally, reciprocally coordinated structure of social consumption funds and thier distribution among individual groups of the population which is determined by all these proportions of differentiation in the population's final incomes.

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GOSAGROPROM OFFICIAL ON UPCOMING WAGE FUND REGULATIONS

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[Article by V. Zhurikov, chief, Organization of Labor and Wages Administration, USSR Gosagroprom: "On the Basis of Stable Norms: Material Incentives for Sovkhoz and Kolkhoz Workers to Increase Output and Manage Farms More Effectively"; passages in all capital letters printed in boldface in source]

> Under provisions of the decree on further improvement of the economic management mechanism of the nation's agro-industrial complex, next year the farms themselves will form their wage fund on the basis of stable five-year plan norms per hundred rubles of gross sales of agricultural output.

Presently, the planned wage fund is assigned to farms by higher organs that also determine its size on the basis of data for the preceding year together with a specified increment for additional output. It has often been the case that farms have used up the entire wage fund even when their production plans were not fulfilled. Nor was there any motivation to economize this fund since economized sums went to the budget.

Such practices in the planning and disbursement of the wage fund resulted in disproportions in the earnings of farmers and animal husbandrymen on farms with the same level of production. Work collectives with a high level of performance occasionally receive less material remuneration than collectives whose performance is not as good. This is one of the reasons why wages on a number of kolkhozes and sovkhozes have grown at a faster rate than labor productivity in recent years.

How the Fund is Formed

Under the new procedure, the size of the wage fund will depend on the volume of gross sales of output in value terms. The wage fund will be determined according to a norm that is adjusted on the average by a coefficient of 0.8 for every percentage point by which output exceeds the normative level.

Farm collectives will now have more material incentive and responsibility for using the wage fund properly. Economized resources will be equally divided between the material incentive fund and the farm's reserve fund. Overexpenditures of the wage fund will be compensated from these two funds. If they are not sufficient, the overexpenditures must be covered by reducing bonuses.

The effectiveness of the new method of forming the wage fund will depend on the degree of correctness and substantiation with which the fund-forming norms are established for each farm. USSR Gosagroprom, together with USSR Gosplan and the USSR Ministry of Finance, has been directed to develop and approve the procedure for establishing norms. The appropriate guidelines have been prepared.

The guidelines provide that the norms shall be devised by rayon agro-industrial associations and other bodies superior to kolkhozes and sovkhozes.

The decree also makes substantial changes in the existing procedure for paying wages and bonuses to the executive personnel and specialists of other state agricultural enterprises as well. At the present time, they receive salaries that are established for groups of farms depending on average sales volume for the preceding 5 years. This procedure has to a certain degree impeded the development of cost accounting and contract [podryadnyy] principles in the organization and payment of labor in collectives of intrafarm subdivisions.

FROM THE PRESENT YEAR ON, THE LABOR OF MANAGERS, SPECIALISTS AND WHITE-COLLAR WORKERS WILL BE REMUNERATED ACCORDING TO RATES (NORMS) BASED ON REALIZED (GROSS) OUTPUT. THE PAY OF WORKERS, MANAGERS AND SPECIALISTS WILL HENCEFORTH ADDITIONALLY REFLECT THE HARVEST AND THE QUANTITY AND QUALITY OF OUTPUT. The farm itself will set wage rates per hundred rubles of sold or produced output. As a rule, they are determined for a collective of managerial personnel, specialists and white-collars workers of a farm, branch, division, small farm, or plot. Rates may be established separately for those responsible for the work of each of the branches of crop production or animal husbandry.

Rates for officials performing their duties for the farm as a whole are based on average sales for the past 5 years and annual earnings.

The procedure for calculating wage rates of managerial personnel, specialists and white-collar workers of divisions, small farms, plots, and shops is the same except that they are based not on average annual sales volume, but on production in the corresponding subdivisions. The established rates are not revised and adjusted in the course of the year. On farms where the product is uniformly produced throughout the year, managerial personnel, specialists and white-collar workers may be paid monthly according to the same rates. In other cases, they will be paid an advance of 80 percent of their salaries for output in the course of the year. The higher the farm's sales, the higher will be the basic pay of managers and specialists.

When contract brigades and teams are formed, it frequently becomes necessary to include specialists in these collectives. In such a case, they must be paid on the basis of rates established for members of the contract

collective--the brigade or the team. For the purpose of calculating rates based on output, the annual wage fund of the contract collective will then include the annual wage fund of specialists receiving the given salaries. Their bonuses are also paid under the procedure established for the contract collective. In the course of the year, these specialists are paid an advance of 80 percent of their official salary.

THE LABOR OF PERSONNEL OF DISTRICT AGRO-INDUSTRIAL ASSOCIATIONS AND AGROPROMS OF AUTONOMOUS REPUBLICS, KRAYS AND OBLASTS WILL ALSO BE REMUNERATED ACCORDING TO RATES BASED ON OUTPUT (STARTING WITH THE PRESENT YEAR). In the given instance, the rates include not only the sales volume of agricultural output, but also the output of processing enterprises subordinate to RAPO's and agricultural committees. Pending the final accounting for the output, these personnel will receive an advance of 90 percent of their salary in the course of the year.

The Payment of Bonuses

The procedure for paying bonuses to managerial personnel, specialists and white-collar personnel of sovkhozes and other state agricultural enterprises is also being changed. They currently receive bonuses for the realization of profits, for raising profitability, for increasing the production and sale of sugar beets, sunflowers, rice, peanuts, and certain other types of products to the state; for attaining the projected yield on reclaimed land; and for attaining certain other indicators. Moreover, the bonuses have been paid from various sources: the wage fund; the material incentive fund; profits; and the funds of procurement and other organizations.

It is not by chance that many farms have produced low harvests, have not tried to make their livestock highly productive, and have contained to operate with a low profit margin while their managers and specialists have received large bonuses for the sale of individual types of products to the state.

HENCEFORTH, HOWEVER, FARM MANAGERS AND SPECIALISTS, IN ADDITION TO EARNINGS BASED ON THE ESTABLISHED RATES, WILL RECEIVE BONUSES FOR INCREASING SALES OF AGRICULTURAL PRODUCTS AND FOR RAISING THE LEVEL OF PROFITABILITY.

In addition to the new material incentives procedure, there are also measures of material responsibility that were also directed toward raising the effectiveness of production and toward attaining high end results. In particular, it was established that managers, specialists and white-collar workers are entirely or partially deprived of bonuses based on the decision of the district agro-industrial association and other higher organizations in the following cases: when a farm underfulfills its plan for the sale of grain, milk, livestock, and poultry to the state and, on specialized farms, the products of the basic branch as well, and also when the growth of wages is faster than labor productivity.

Strengthening the material incentive of farm managers and specialists to increase the effectiveness of production will unquestionably promote the further diffusion and improvement of cost accounting and contract relations

because under present conditions, it is namely these [relations] which are becoming the basic levers in activating the human factor.

Practice confirms the high effectiveness of organizing production on the basis of the principles of interfarm accounting [vnutrikhozyaystvennyy raschet]. Judging by the reports, most of the farms have assimilated it. But it is no secret that in this work there is no small amount of formalism generated by the low level of economic and organizational work on farms. Material incentive measures have also been insufficient. Under the existing conditions, up to 25 percent of the directly economized expenditures (compared with the plan) in crop production and up to 40 percent in animal husbandry are used to award bonuses to workers. But since plans were frequently conveyed without sufficient substantiation to production subdivisions on many farms, the size of the bonuses was not appreciable.

Now up to 70 percent of the saving on expenditures indicated in the target will be used to pay bonuses to collectives of subdivisions of sovkhozes and other state agricultural enterprises. But if expenditures exceed the indicated level, the overrun must be compensated from funds earmarked for the payment of wages and bonuses to collectives.

The decree on the improvement of the economic mechanism in the APK calls attention to the need for broader application of wages with due regard to gross income. In this case, the magnitude of the material incentive depends not only on the quantity and quality, but--and this is very important--on the cost of its production. SUCH A WAGE PROCEDURE FOR COLLECTIVES OF BRIGADES AND TEAMS IS THE MOST RELIABLE ANTI-COST MECHANISM THAT IS GEARED TO WORK FOR THE ATTAINMENT OF THE HIGHEST END RESULTS.

In the interest of increasing the material interest of contract collectives as well as of persons working under family and personal contracts, farm managers are authorized to pay the workers of these collectives in kind up to 25 percent of the products produced in excess of the volume specified in the contract. If the workers so desire, they may be paid the retail value of products in lieu of payment in kind.

Collective payment for products is one of the main principles behind the successful work of brigades and teams operating under contract. This principle is realized in practice through the job contract plus bonus system, which is supplemented by one more important measure that strengthens the relationship between earnings and the results of production. Within the limits of the approved (normative) wage fund, sovkhoz directors are authorized to establish rates for products from the wage fund that are increased up to 150 percent depending on the increase in the yield of farm crops and the productivity of livestock and poultry. But there should be no increase in wage costs per unit of output (the same procedure has also been recommended for kolkhozes).

5013
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USSR STATE LABOR COMMITTEE CHAIRMAN ON WAGE SYSTEM REFORMS

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[Interview by Staff Correspondent N. Prikhodko with Ivan Ivanovich Gladkiy, chairman, USSR State Committee on Labor and Social Problems, under the heading: "An Important Interview": "Restructuring the Wage System" (date and place not given)]

[Text] The decree "On Improving the Organization of Wages and Introducing New Wage Rates and Salaries for Workers in the Industrial Branches of the National Economy " was recently adopted by the CPSU Central Committee, the AUCCTU, and the USSR Council of Ministers.

Restructuring the wage system is the most important measure in the social program of the 12th Five-Year Plan. Suffice it to say that new wage rates and salaries will be introduced for 75 million workers and employees, which amounts to about two-thirds of those employed in the social economy.

Responding today to the questions of editorial correspondent N. Prikhodko on restructuring the wage system is Ivan Ivanovich Gladkiy, chairman of the USSR State Committee on Labor and Social Problems.

[Question] Please describe the distinguishing features of the planned wage restructuring.

[Answer] The greatest innovation is found in the fact that for the first time the restructuring embraces all the constituent parts of the wage system: the wage rate system; the bonus system; the mechanism for supplementary payments and additional allowances; and setting norms for labor. It envisages changing to the normative method for formation of the means for paying wages everywhere, as well as wide use of brigade self-financing and the collective contract.

The transitions touch on all workers without exception in industrial associations, enterprises, and organizations; in construction and agriculture; in transportation and communications. The principal feature of the restructuring lies in the fact that all the measures for improving wages are being implemented on a principally new basis. As was defined by the 27th CPSU Congress, the increase in wage rates and salaries will be made at the expense of the funds earned by the labor collectives themselves.

The basic statutes of the adopted decree were subjected to practical examination and are based on the experience of progressive collectives, such as the Belorussian Railroad, the Azot Association in Shchekino, the Petrovskiy Sovkhoz in Leningrad Oblast, and many others.

In introducing the new wage conditions, the necessary prerequisites are being created to establish and maintain strict dependence of wages upon the quantity and quality of work and the end results of production.

All hindrances which inhibit the initiative and independence of enterprises in increasing the incentive role of wages are being removed. Improving the organization of the wage system is directed toward increasing the personal interest of the workers, specialists and employees in mobilizing reserves and introducing progressive experience, and in conscientious, skilled and highly-productive labor.

The new wage conditions will provide wage advantages for priority directions in the development of the national economy; these are: accelerating scientific-technical progress, radically increasing the growth rate of labor productivity, fundamentally improving the quality of manufactured products, and economizing in every way on material resources. Moral and material incentives will be oriented toward increasing the quality of the products and the work accomplished, in order to attain the highest world standards.

[Question] The basis for wage organization is the wage-rate system. What sort of changes have been introduced to it?

[Answer] The task has been set to return to the wage-rate system the role of the main regulator of wages, and to increase the share of the rate from 50 to 70-75 percent of one's wages.

But increasing the share of the rate is not the end in itself. It has been proposed to use the wage rate to ensure more complete consideration of the skill of the worker, the complexity of the labor, and the conditions of the industrial activity; in a word--to tie the wage rate directly to the labor contribution.

Among workers the wage rates are to be increase by 20-25 percent. And in order to create more personal interest in increasing one's skill and quality of work, and to eliminate egalitarianism in paying highly-skilled and low-skilled workers, the difference between the wage rates for different skill categories will increase. The range of the wage scale will be expanded significantly.

As a result both the absolute and the relative growth of the wage rate for the highest skill categories will be much greater than for the lowest. For example, in the food industry the rate for a worker in the first category will be increased by 16 percent; but for the sixth category, the increase will be 33 percent. In light industry the corresponding figures are 18-19 and 24-25 percent; in machine building, 19-20 and 26-27 percent.

Especially serious positive steps will be taken in the wage-rate system for machine building. It is planned to introduce three rate levels in the branch. The very highest will be for tool-makers, and for repairmen and set-up men who service automatic lines, machine tools with numerical programmed control, flexible production systems, and other complex, highly-efficient equipment. The second category, somewhat lower, is being established for workers employed at metal-working lathes, cold metal presses, and those who repair the instruments and equipment. The third category is intended for all other workers in machine building. The wage rates for the first level are 21 percent higher than the third, and 12 percent higher than the second. In addition, for workers who service modern, complex, highly-productive equipment, an eight-step wage scale is to be introduced as well.

Workers in other leading professions, not only in machine building, will be placed in an advantageous position in terms of the wage scale: in transportation for example--engineers of locomotives which pull heavy or lengthy trains, engineers on express passenger trains, and operators of highly-productive vehicles; in power engineering--workers at atomic power stations, service personnel for especially complex and powerful turbines, and those employed at repair of complex units and electrical circuits.

[Question] How will the system for additional allowances and supplementary payments to workers now be structured?

[Answer] An additional allowance to the wage scale for professional mastery is an important element in the system of wage organization. The new conditions authorize establishing these additional allowances in an amount up to 12 percent of the wage rate for workers in the third skill category; 16 percent for those in the fourth category; 20 percent for the fifth; and 24 percent for the sixth. At present they are established in accordance with the quality of the manufactured products and not with the length of service.

For those months in which a worker produces defective goods or if the quality of his work diminishes, additional allowances for professional mastery are not paid. When a worker systematically produces defective goods, fails to complete production tasks or meet established norms for application of labor the additional allowances are totally withdrawn. Besides this, in case of gross violations of technological discipline a worker's skill category can be temporarily reduced, for a period up to three months, and it will be restored only after recertification of his skill level.

Enterprises and organizations are granted the very widest latitude in providing incentives for operation with fewer personnel. The new wage-rate system does not limit the amount of payment for operating with fewer personnel, for carrying out an additional volume of work, or for expanding the zone of service. Also very important is the fact that additional payments may be given to all workers at an enterprise, without limiting the lists.

The new wage system envisages a principally new mechanism for compensating for unfavorable working conditions. Its main feature lies in the fact that appropriate compensation is introduced in all branches, instead of increased wage rates (except for the coal, metallurgy and chemical industries, where wage rates are already directly tied to such working conditions).

The right to receive additions does not come automatically, just by being a member of a profession that is on the corresponding list; it is based upon the results of analysis of the actual working conditions at specific workplaces, which must be certified.

For the purposes of increasing the independence of associations, enterprises and organizations in analysis of working conditions, the administrators have been granted the right to introduce, with the consent of the trade union committees, differentiated supplementary payments for workers in an amount up to 12 percent of the wage rate (or salary) for jobs with difficult or dangerous working conditions, and up to 24 percent for jobs with especially difficult and especially dangerous working conditions. The list of specific workplaces and supplementary payments for unfavorable working conditions and measures for improving the working conditions are included in the collective contracts at the same time.

In consideration of the intensive work rhythm on conveyer lines, flow lines and automatic lines at light industry and machine-building enterprises, their administrators have been authorized to establish with the consent of the trade-union committee supplementary payment for labor intensiveness in an amount up to 12 percent of the wage rate. The total amount of the supplemetary payments for working conditions and for labor intensiveness may not exceed 24 percent of the wage rate.

[Question] One of the most important problems is setting up a wage system that provides incentive for highly-effective labor to engineers and specialists. It's no secret that in recent times the prestige of engineer work has sharply declined. How will these problems be resolved under the new conditions?

[Answer] Under the new conditions the wage system for specialists will undergo fundamental changes. First of all, in order to raise the prestige of engineer work, the salaries for supervisors, specialists and white collar workers will be increased by 30-35 percent on the average. Their earnings will be placed in direct dependence on the concrete results of accelerating scientific-technical progress, on increasing the quality of manufactured products, and on growth of labor productivity and production effectiveness.

Designers and engineers directly employed at developing new technology will be placed in an advantageous position in terms of wages, in comparison with other specialists.

The approach to professional advancement of specialists is also undergoing fundamental changes. A direct connection is provided between their wages and their personal labor contribution, and conditions are being established to increase their personal interest in raising their professional qualifications and the quality of their labor. Toward these ends categories are being introduced for all specialists with a wide "point spread" on the chart of the salaries for their positions. Today they can occupy only two positions at an enterprise: engineer or senior engineer; economist or senior economist; and so on. Now, four-tiered positions are being introduced: engineer, second-class engineer, first class engineer, and leading engineer. And for designers and production engineers, five positions have been established.

Thus, a specialist carrying out pure engineering work and not occupying a supervisory position can, depending on the results of his labor, receive a significant wage increase. For example, in machine-building a specialist's salary can increase from 130 rubles for an engineer to 230 rubles for a leading engineer. It is no longer necessary to observe the median values of the "point spread" for salaries in accordance with the table of organization, and the mandatory ratio by the number of specialists in different job categories. That is, the table of organization will practically cease to exist in a department or shop. The supervisor himself determines what qualifications and correspondingly what job level the specialists need in a specifically structured subunit.

The decree devotes special attention to increasing the role and the responsibilities of the production officers [komandirov]: the foremen, section and shop chiefs, and directors. A significant salary increase is envisaged for these officials. For example, under the new conditions a foreman's salary will exceed by 20-35 percent the wage rate of workers of the sixth category, the highest. The supervisors' earnings will depend directly upon the labor effectiveness of the working collectives which they head. At the same time increased demands are placed on the supervisors for the quality of the products; for reducing their production costs; for growth of labor productivity; and for introduction and effective use of modern machine tools, equipment and industrial processes.

Under the new wage conditions the system of additional allowances for specialists will be put in order. Instead of an additional allowance for qualification, which is poorly connected with the specific contribution and the end results, additional allowances will be instituted only for high labor achievements or, for a period of carrying out especially important and responsible work. The size of these allowances can amount to up to 50 percent of one's salary.

I'd like to note that expanding the "spread" of the salaries, introducing additional positions, and making the mechanism for supplementary payments uniform, the role of certification of supervisory workers and specialists is increased. It is precisely by the results of certification, held no less than once every three years, that questions of changing the amount of one's salary, advancement in position, and establishing or withdrawing additional allowances are to be decided.

[Question] And how will the bonus system change? The complexity and confusing nature of the existing bonus system, and the lack of correlation between the amount of the bonuses and the real labor contribution are being held up to sharp criticism. This was mentioned from the rostrum at the 27th CPSU Congress...

[Answer] Bonus systems are aimed at accepting and fulfilling intensive plans, 100-percent observation of contracted obligations, increasing labor productivity, reducing production costs, improving product quality, and achieving high end results.

The excessive regulation by central authorities on bonus questions is being abolished. The enterprises themselves have been granted the right to approve conditions for awarding bonuses to workers, specialists and employees on the basis of the specific production conditions and the tasks facing the structural subunits.

The rights of the ministries are also being expanded. They have been granted the right to approve the conditions for and the amounts of bonuses for the enterprises' supervisory officials.

A principally new aspect is the transition from awarding bonuses to individuals, to awarding them to the collectives of brigades, sections, and shops for the end results of their work. The bonus sums which they earn will remain at their complete disposal and will be distributed among the members of the production collective in accordance with the index of labor participation. Within the limits of the sums earned, all restrictions have been removed for awarding the maximum bonuses to the workers who have made the decisive contribution to the high labor achievements of the collective.

The system for awarding bonuses to supervisory workers has been fundamentally changed. Awarding bonuses to supervisors is increasingly tied in with the basic results of the economic activity. Bonuses will be paid primarily for 100-percent fulfillment of the plan for product sales, in accordance with the contracts. The procedure for awarding bonuses from special sources is being put in order. The shameful practice is being eliminated in which an enterprise systematically fails to fulfill production assignments, and the supervisory workers nevertheless can be awarded bonuses in accordance with special systems.

[Question] What will the sources be for the funds needed to introduce the new wage system?

[Answer] As was already noted, the increased wage and salary rates will be implemented within the limits, and at the expense of, the funds earned by the associations and enterprises themselves.

Among the specific sources one can cite increased production volume and the improved quality of manufactured products, upon which the amounts of the wage and material incentive funds directly depend. It is also necessary to examine the wage structure and eliminate unsubstantiated payments, withdrawing those additional allowances and supplementary payments which have ceased to provide incentives and are simply a mechanical addition to one's wages; to put labor norm-setting in order; and to eliminate all unearned bonuses.

Funds can also be derived by virtue of savings in the wage fund as a result of releasing excess personnel and simplifying the management apparatus. In certain conditions, with the consent of the labor collectives, it is authorized to use a part of the assets from the material incentive funds when introducing the new conditions.

I would like to say that the enterprises have been given firm guarantees that all the funds which they have earned and procured by means of mobilizing their own production reserves, are not subject to withdrawal, and can be used entirely for transition to the new wage conditions.

It is important to point out that with the introduction of the new wage conditions, transition will be carried out in all production branches to normative formation of the wage fund. In this manner the aforementioned guarantee is placed on a still more reliable economic basis.

Work on seeking out reserves for increasing production effectiveness must be provided for at the time the annual plan is being drawn up. Special attention must be devoted to mobilizing organizational-economic and social factors for increasing production effectiveness. Many jobs which have previously passed certification must be approached critically, and examined once again in the context of all elements of job organization--which will permit increasing labor productivity and, consequently, provide for freeing up a portion of the personnel while increasing the volume of manufactured products.

Speaking about the deadlines for transition to the new wage system, enterprises and labor collectives must even now actively prpeare for introducing the new wage and salary rates. It is envisaged that direct introduction of the new wage conditions will begin in 1987 to the extent that the associations, enterprises and organizations are prepared and have procured and mobilized the necessary means for this. All of this work must be completed in all industrial branches in the course of the current five-year plan.

Presently the main efforts must be concentrated on explanatory and preparatory work, which actively involves the labor collectives. Without their active participation, their initiatives and creative search for finding reserves within their own industries, the ensuing accumulation of resources necessary for the introduction of the new wage and salary rates will not be possible.

Everyone must be briefed on the principles of the new approach to wage organization, bringing the topic to literally every worker, making everyone an active participant in the process of transition to the new wage system: therein lies the guarantee for success and for carrying out all measures with maximum effectiveness.

9006
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FIRST DEPUTY RAILWAYS MINISTER ON CORRUPT PRACTICES

Moscow GUDOK in Russian 13 Aug 86, p. 2

[Article by first deputy minister of the means of communication and transportation of the USSR V. Ginko: "To Look the Truth in the Eye"]

[Text] Railway transport is fully involved in every aspect of the processes currently taking place in the economics, industrial organization, management and the social sector of the USSR. With total dedication and deep understanding of the urgency of the course adopted by the party for reorganization in all branches of our existence and accelerated socioeconomic development of society, the workers at the main line railways have already achieved much since the April (1985) plenary session of the CPSU Central Committee, in the competition leading up to the Congress, and in the interval since the 27th Congress of the Party. The plan indexes for the most critical parameters are being realized and the transportation system is coping with the shipment of goods, both in aggregate and in terms of the assortment of primary shipments. The passenger service is improving.

Of course, our huge transportation system still has much to do. In struggling to overcome the deficiencies and boost the work pace we are being increasingly assisted by the atmosphere of openness and publicity which has been ushered into our society--a particularly important factor in the area of deficiencies. Without objective information, we cannot make sound and effective decisions. This is especially applicable at present, when the party is urging a consistency of word and deed from its staff and waging a campaign against all species of embellishment, showmanship, and sensationalism.

Today, we have all become reacquainted with a very basic fact--only by looking reality in the eye, no matter how unpleasant or even depressing, can we move ahead, improve the situation in any given area and, ultimately, tangibly improve our life. The "successes" achieved on the smooth paper of flashy reports also remain on paper. Neither meat nor cotton, nor apartment houses, nor concrete tonnage will come from them. Furthermore, such "successes", push us backwards by soothing and removing the stimulus to improved performance, and translating us from concrete reality to a world of bureaucratic illusions.

In the end, a lie--let us call it by its proper name--which is brought into being in reports and official forms, finds its way into our daily existence, corrupts us, and provides an occasion for thinking in terms of "half-truths."

All the more earnestly should we, the transportation workers, approach the results of the recent comprehensive inspections at a number of railways, organized by the USSR People's Supervisory Committee.

It should be stated that the ministry had already long been troubled by the situation regarding accuracy of reporting and record keeping at many enterprises and railways. The smokescreens [literally, "eyewash"] and exaggerated claims had been the subject of the most severe criticism in May of the year before last and in last August. The state of affairs at the Kuybyshev, Pridneprovskiy, Central Asian, Moldavian and other railways was examined in detail. And the appropriate reprimands were made. Even so, the inspection of the People's Supervisory Committee (KNK) demonstrated that a lot of people--especially the executives--still have not grasped the fact that the struggle for truth, against deception, whatever form this deception may take, is not a campaign, not a temporary "fad", but a permanent course and the essence of our entire organizational activity. And we shall continue to fight relentlessly and without quarter against the exaggerations, the distortions of the true situation in the reports, and the smokescreens, no matter what arguments "for the good of the enterprise" are defending them.

The members of the People's Supervisory Committee inspected 474 railway stations and 798 industrial enterprises. And the results turned out extremely alarming. A mere sampling at 10 railways revealed that 7.8 million tons had been written down in excess of the volume of shipped goods in the 1985 reports! At 7 railroads--Gorkiy, Lvov, Moscow, Pridneprovskiy, Northern, Northern Caucasus, and Southern Ural--which had convincingly reported on overfulfillment of the shipment plan last year, after subtraction of the exaggerations the plan turned out to be underfulfilled. Is this not grounds for the most serious concern as to the atmosphere prevailing at these railroads and the civic, if not the communist party spirit of certain executives!

The largest exaggerations were found at the Kazan, Tula, Chelyabinsk and Krivoy Rog divisions. Tens and hundreds of thousands of tons of goods created on paper beneath the pencil of the zealous devotees of "ahead-of-schedule" reporting, force us to wonder not only about the motives of certain parties, but also whether serious deficiencies exist in the actual performance reporting system of the transportation enterprises and subdivisions.

Instead of developing and adopting progressive methods of railroad car loading in cooperation with the dispatchers, finding of ways for the most rational utilization of the cars and achieving a tangible increase in the volume of shipments, apparently it is more easy and convenient for many persons to simply conspire with the client in a mutual deception. How easy it is to establish "good relations" with a customer enterprise by suggesting: "You show more weight in your documents, we will do the same in ours, and in return our cars won't pass you by in time of need." As a result, fictitious

documents are created for the car weight inspection, even though sometimes not a single car is weighed; reports on overfulfillment of the assigned static load, even though the cars are rolling half empty; and, in the end, prizes to both the station masters, and the dispatchers, and the managers of many levels. Such "friendship" between collateral enterprises is not a friendship, but a criminal conspiracy in the full sense of the word.

But how has this become possible? Many stations had not even set technical norms for the load of the railroad cars. This is especially true of light goods and metal scrap. Hence, for example, at Kozhukhovo station of the Moscow line, 70 tons of metal shavings were reported to be loaded into a car, whereas in fact not even 30 were loaded. Or sometimes it happens as follows: at the Magnitogorsk and Cherepovets metallurgical combines, for example, all the products would be weighed during shipment and the correct weight entered in the factory documents, but in the railroad invoices the weight would be exaggerated up to the maximum cargo capacity of the car on the "friendly" request of the station masters. Evidently, they expected that the inspectors would not catch on.

It must be mentioned that in many cases the shipping workers of the enterprises embark on a career of exaggeration. Thus, the Krivoy Rog cement and mining combine, the Dobryatino and Sudogodskiy quarries in the past year and the first quarter of this year shipped out 25,000 tons cement, 20,000 tons of other industrial raw material, and 83,000 tons of fertilizer less than was reported in the documents. This is being explained by mistakes in the weight determinations of the shipments. But as a matter of fact, the railroad scales at these enterprises are simply not used. And the railroad employees close their eyes to this and thereby participate in the defrauding of the state.

Furniture, ferroconcrete structures, and light industrial products--all of these have been shipped in nonexisting tonnages, thousands of tons! The matter has reached a point where the weight of a pair of shoes, judging from the documents, is 4 kilograms, while that of a child's toy is 5½.

And what arouses incomprehension--or better, indignation--is the functioning of the railroad inspector system itself. For example, at the Northern Caucasus railway in the past year examiners inspected 292 enterprises and discovered forged documents and exaggerated figures at only 14. But in the present year the People's Supervisory Committee has ascertained that violations exist at each of the inspected stations. How can this be explained? The role of the inspector system has been minimized, and the railway managers do not properly support the inspectors, nor do they expect much from them.

Altered documents, exaggerated figures and concealment of breakage, willful alteration of the description of an event out of proportion to the actual details--"breakage" instead of "wreck"--and such activities have been found in nearly every department of the investigated railroads. Here are several examples. At the Gorkiy subdivision on 21 and 22 March of the present year there were 60 late passenger trains, while the report indicated 15. The next

day, 18 trains were late, not a single one being reported. At the Northern Caucasus railway in 1985 there were 323 unreported cases of derailment. And this involved 683 damaged cars! The figures reported on construction and opening of new apartment houses, volume of track repair, between-railway shipment of cars, etc., are being exaggerated.

The ministry has already taken the appropriate steps for the disclosures of the inspections. Foremost, railway directors whose connivance has brought about the exaggerated and altered reports have been most severely punished. In this matter, we are proceeding with full severity. If it were a question of certain omissions in production, unresolved problems, even technical, organizational, or administrative mistakes, one would expect a different policy. After all, a decent working individual can and will make mistakes, or might not deal with a particular difficult problem. We can and must hold him responsible, but we must also help such individual. But when it is a question of direct fraud, of the propensity of the lovers of the easy life to correct all their omissions with the stroke of a pen in a report--let them not even dream of any leniency! Nor will we accept any excuses--for example, that this was done on behalf of the collective of the enterprise or railway. These "noble" words are generally used to cloak the common tendency to lead an untroubled existence and look good before one's superiors. And, let us speak openly, the prizes won for nonexistent work are not the least of the motives for the deception.

At present, the ministry has significantly tightened supervision, is accelerating the development and adoption of progressive loading methods, and expects better performance from the inspectors and examiners. Only the truth, only objective and accurate information will allow us to meet the demands of the party and bring the operation of railroad transport up to the level of the tasks confronting the entire economy.

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MINISTRY COLLEGIUMS FAULT RAIL SECTOR CONSTRUCTION EFFORTS

Moscow GUDOK in Russian 31 Jul 86 p. 2

[Article by V. Gitkovich: "To Build More Quickly, Less Expensively, and Better: Notes From a Meeting of the Collegium"]

[Text] A joint session of the collegium [board] of the Ministry of Railways (MPS) and the Ministry of Transport Construction discussed the topics of radical improvement in the planning, design and enhanced efficiency of capital construction in railway transportation. Present at the meeting were the directors of the railways and the railway construction trusts, the deputy directors of the railways, the construction foremen, the administrators of the trusts of the Ministry of Transport Construction, members of the concerned central boards of both ministries, as well as members of other ministries and government agencies.

Taking part in the joint session was the Chief of the Department of Transportation and Communications of the CPSU Central Committee, V. S. Pasternak.

Recently, a number of important resolutions of the CPSU CC and the USSR Council of Ministers have been adopted concerning fundamental questions of further development and improvement in capital construction. Accordingly, the Ministry of Railways and the Ministry of Transport Construction have determined strategies of solving the major problems of construction at the main railways of the country.

At the outset of the new five year period, the main attention in transportation will be devoted to the technical re-outfitting, far-reaching promotion of intensive technologies of heavy weight and high speed traffic, development and modification of the existing railroad network. The primary targets are the 15 critical lines where the increase in goods and passenger traffic is expected to be 2-3 times greater than the average for the network, as well as the factories of the MPS.

The modification at each of these lines will be pursued as an integrated process. The construction of facilities within the individual sectors will

be cut back slightly, but their modification and technical re-outfitting will be increased. Accordingly, the resources will be reallocated.

An extremely notable feature of the present five year period is the special attitude toward social problems. Suffice it to say that 600 million rubles are being diverted from production for these purposes, while the overall capital investments are estimated at a figure of 2,630 thousands. No less than 200,000 apartments are scheduled for construction. Such is the strategy and such are the plans of the near future.

But how are they being implemented?

There are some trends toward improvement. In a six month period as compared to the same term of the past year, not only has more been done in both a percentage and a monetary term, but the plan for introduction of new lines, second lines, automatic interlocking, and communications, and the program for development and expansion of station lines, have been surpassed. The October, Odessa, Donetsk, Southern, Northern Caucasus, Central Asian, Azerbaydzhan, Alma Ata, Transcaucasian and several other railways have carried out successful programs of capital construction. The Sevkavtransstroy, Yugozaptransstroy, Yuzhtransstroy, Tselintransstroy, Pavlodartransstroy, Sevzaptransstroy, Balttransstory, Mostransstroy, Transsignalstroy and other trusts have successfully implemented their plans.

However, there is no shortage of deficiencies. The railroad construction organizations of the Gorkiy, Kuybyshev, Baltic, Sverdlovsk, Western Siberian, Kemerovo, Krasnoyarsk, Volga and Tselina railways have fallen seriously behind. At many of these, the construction base is being slowly developed.

For their part, the central boards of the Ministry of Transport Construction only met the semiannual plan of the MPS by 94.7 percent. Of 97 trusts and construction authorities working on MPS projects, 57 did not fulfill their program. The situation is especially poor in the area of electrification of the railways, construction of locomotive systems, and modernization of the factories of the Rolling Stock Repair and Spare Parts Production Main Administration (TsTVR).

The Ministry of Transport Construction is also behind in the introduction of dwellings and social-cultural-domestic facilities. They have failed to introduce 1400 apartments as per the semiannual plan. Around half of the scheduled schools and hospitals have been put into service.

Little headway has been made in reducing the volume of uncompleted construction. The 72 projects begun as far back as the 10th Five Year Period, but still incomplete, are of absolutely no use. The modernization of the enterprises is going slow. For example, at the Voronezh Diesel Locomotive Repair Factory, it has been underway for 10 years, and no end is in sight.

Much of the blame also lies with the railroad employees: the documents are ill prepared, funds are allocated late, and equipment is not delivered to the

sites on time. Thus, we may mention that 11 of 21 start-up boiler rooms still lack various fittings.

Many other shortcomings were pointed out, preventing the work from proceeding in full swing. In the majority of instances, the criticism was direct, mentioning the guilty by name, whether it be the head of the traffic flow division, the deputy director of the planning and economics central board V. Prigorovskiy, or the director of the Gorkiy railway A. Basov and director of railway construction Yu. Kasatkin, the administrators of the Angarstroy trust V. Bogach and the Tsentrobamstroy trust Ye. Lypkan, or other parties.

We should, however, point out that when it comes to deficiencies, the very cautious phrases "underfulfilled", "underassimilated", and even "underintroduction" continue to be used, and it even appears that we shall now be hearing "under-overfulfilled" in place of "failure". There was also little advice as to how to proceed in future and what this reorganization of which we are speaking should involve.

Regrettably, several of the speakers instead of analyzing the situation, singling out deficiencies, and making specific practical recommendations, simply read a previously prepared text, and what is more, a text written in outmoded formulas. Such "presentation" would begin with a list of achievements. And since there are essentially no achievements at the backward enterprises, all sorts of comparisons are made with the corresponding interval of a different, more profitable quarter, year, or five year period in percentages or absolute figures, again depending on which is more auspicious. Then comes a long and detailed list of the objective reasons why the work is being delayed. And when the listener is already fatigued by the endless flow of facts and figures, individual shortcomings are hurriedly admitted, ending with the loud conclusion: "Believe me, our collective is exerting every effort to successfully deal with the problems."

Such presentations are of absolutely no avail at a joint meeting, where people have come together to solve festering problems in a personal dialogue. And it was proper that the director of the Transbaykal railway, G. Vidyakin, should have been stopped in his presentation, when instead of looking for an answer at this tribunal he continued his dispute with the transport construction people. Specifically, he tried to explain his failure in making available "windows" for the operations of the electrification workers by the fact that he wanted to force the construction workers to make good their mistakes at previous stretches of track.

The stunt of the administrator of the Zapsibtransstroy, Yu. Skvortsov, was also censured. Before setting out for the meeting, as a kind of "lightning rod", he had sent a telegram to both ministries, reporting that the construction workers were not being given access to a work front for modernization of the Novosibirsk switch factory.

The director of the Sverdlovsk railway, V. Skvortsov, was much more self-critical. He acknowledged that his efforts at organizing the facilities were

meeting little success: in six months, they were five million rubles behind. He not only promised to do everything necessary to make up the work, but also stated that, if unsuccessful, "we will ourselves recommend a change in staff." Such words are not "cast to the winds."

The director vouched for a further increase in the volume of railway construction.

Judging on the whole, V. Skvortsov is fully aware that now is not the time to exonerate oneself, to shift the blame onto others, but rather to find ways of overcoming the hardships, possibilities of cooperation and mutual assistance, and together solve the main problem--quickly, inexpensively and ably constructing everything needed for further expansion of railway transportation.

It was in just such spirit that the remarks of the director of the October Railway, G. Fadeyev, were entertained and, therefore, so well received. He declared that in 1984-1985 the railway and transport construction workers had succeeded in doing more than in the three preceding years. In this period, a solid foundation was laid for tremendous growth in the 12th Five Year Period, which also enabled an overfulfillment of the first six months program. This was the result of close cooperation among railway, construction and design workers. Many problems are being solved here without recourse to the ministries.

I would also like to bring up the subject (said Fadeyev) of expanding the authority of the railway director. The October Railway is a huge enterprise, and every little detail cannot be anticipated. But I do not have the right to make a decision to repair several kilometers or build a small facility for which an urgent need suddenly arises. Capital investments at the disposal of the railway director himself are needed.

It is not possible to dwell on all the presentations in detail. But summing up what was said, it becomes clear that the urgently needed radical reorganization of transportation construction has not yet taken place. To accomplish this more quickly, it was proposed that both ministries work out a definite long term program of expansion of the existing network, construction of new lines, and electrification. It will then become clear where the construction workers should set up operations. Projects should also be developed in strict keeping with this program.

The workload should be evenly distributed over the years, to avoid peaks and depressions, when it becomes necessary to disband the specialized subdivisions and subsequently re-form them again.

The start-up complexes should be formulated and approved at the design stage, and thereafter left untouched. They should not be crammed with extraneous matter. When a rail line is being modernized and electrified, the routine traffic should be reduced as much as possible, concentrating the construction workers, materials and resources here and quickly completing the whole affair.

At new construction sites, no temporary housing developments should be put up. They only get in the way afterwards. Such sites should begin with construction of regular houses, inhabited first by the construction workers and later on by the railway operators.

There is much benefit in a comprehensive competition between railway, construction, and design workers, widely adopted, e.g., at the Moscow railway with the enterprises of the Northern and Western central boards.

Teamwork should be concentrated on at least making up the shortfall as of 1 September. And by the end of the year, the construction-installation plan should be surpassed by 40 million rubles on the part of the MPS and by 60 million on the part of the Ministry of Transport Construction.

These and many other recommendations were embodied in the resolution of the joint session of the collegiums of the two ministries. Their unconditional fulfillment will enable a successful development of railway transport in the 12th Five Year Period.

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OFFICIALS REVIEW TRANSCAUCASIAN RAILROAD PERFORMANCE

Moscow GUDOK in Russian 30 Jul 86 p. 3

[Excerpts of article by the "Gudok"-Gruzinform Service, Tbilisi: "The Transcaucasian Railway: To Be Decisively Reorganized: Remarks from a Meeting of the Active Party Members of the Enterprise"]

[Excerpts] Recently, in the chamber of the Central Committee of the Georgian Communist Party, a meeting was held of the active party members of the railroad worker collectives of the Transcaucasian Railroad, involving representatives of the Party, Soviet, trade union and government agencies of the Georgian SSR.

The discussion concerned the goals of the party organizations and railroad worker collectives of the republic in meeting the decisions of the 27th Congress of the CPSU, the June (1986) plenary session of the CPSU Central Committee, and the 27th Congress of the Georgian Communist Party.

First Secretary of the Georgian Communist Party Central Committee, D. I. Patiashvili, presented a report.

Taking part in the meeting were: director of the Transcaucasian Railroad Z. D. Papava, director of the Yerevan Division and deputy director of the railway A. A. Kandilyan, deputy chairman of the Council of Ministers of the Abkhazskiy ASSR Sh. M. Shakaya, first secretary of the Lenin Party Raykom of Tbilisi R. I. Dzhavakhishvili, head of the Tbilisi division of the railway O. Sh. Bichiashvili, second secretary of the Adzharskiy Party Obkom G. Ye. Chigogidze, secretary of the Central Committee of the Lenin Communist Youth League of Georgia G. G. Tonkonogov, head of the Georgian Maritime Ferry Service D. K. Chigvariya, Yerevan station railway traffic controller B. S. Sarkisyan, first secretary of the Samtredia Party Raykom T. Sh. Imedadze, Sukhumi station master N. A. Chulfa, secretary of the Tbilisi Junction Party Committee Yu. I. Dzhishkariani, operator of the Sukhumi Locomotive Depot D. F. Koridze, chairman of the

trade committee of the Sukhumi Car Section N. N. Naroushvili, and first secretary of the Dusheti Party Raykom N. A. Odishvili.

The minister of railways N. S. Konarev gave a presentation at the meeting.

Taking an active part in the session were sector leader of the Transportation and Communications Department of the CPSU CC P. D. Monyakin and deputy chairman of the USSR Gosplan V. Ye. Biryukov.

The socialist duties of the collective of the Transcaucasian Railroad for the 12th Five Year Period were discussed and adopted.

The workers of this railroad, like those of the entire sector, welcomed with immense satisfaction the recent resolution of the CPSU CC and the Council of Ministers of the USSR "Concerning Measures for Further Improvement of the Work and Strengthening of the Material-Technical Base of Railway Transport in 1986-1990." This document assigned great importance to the construction of the Caucasian mountain pass railroad, which should significantly improve connections between the republics of Transcaucasia and the other regions of the country. It is also scheduled to complete laying the Marabda-Akhalkalaki line. The Batumi goods station will be thoroughly remodeled. Construction of a repair factory for railway passenger cars will be organized in the city of Marneuli.

The new construction is to be carried out concurrently with expansion of the railroad. An adept juggling of current and long range programs is also important. For much time, such activities had not been well thought out at the Transcaucasian railway. This resulted in a considerable waste of resources. The pursuit of volume performance indicators at the expense of efficiency, which was characteristic of the previous railway administration, has had extremely negative effects on the entire operation. The tracks and locomotives, the signaling and communications equipment, have fallen into a very poor state. The primary quality indicators have declined sharply.

At the heart of the matter, the enormous outlay for expansion of the Transcaucasian railway (in the past five year period, half a billion rubles were allocated) has not produced a return; what is worse, the railroad actually began to operate at lower efficiency. Such a universal indicator as the railway car turnover dropped by 12 percent in the territory of the republic. While on the whole the labor productivity of the railroads increased by 8.9 percent in the first six months, on the Transcaucasian railway the improvement was no more than 1.5 percent. The railway has intensively constructed second tracks and renovated the locomotive fleet, but the train speed on the track sections decreased by 2 percent.

The participants of the meeting pointed out that the railway is afflicted by hectic traffic patterns. In the past year alone, almost 3000 passenger trains,

to say nothing of suburban trains, have been cut from the schedule. Due to the unsatisfactory condition of the track, dozens of warnings to reduce speed have been registered. Even in such conditions, there is a long-standing interdepartmental feud between the heads of the traffic and track services with regard to making available "windows" for track improvements.

The speakers pointed out the need for the most earnest and resolute correction of deficiencies in the current operating program. For the railroad still is not entirely meeting the transportation needs of an important region of the country and the enterprises of a number of its economic sectors. Thus, in the past year, more than half a million tons of trans-shipped and 700,000 tons of imported goods failed to reach their customers. Serious interruptions in the shipment of farm produce have been tolerated. In the present year, construction materials and equipment and metal articles are being delivered in an irregular manner. The six month plan of goods shipment has basically failed.

What is the problem? In the chain of shipments, everything is closely interwoven and heavily interdependent. Miscalculations and failed performance in one link of the chain (of which there are many) produce interruptions in the entire operation, almost by a chain reaction. Nor has the railway begun a committed campaign to bring reserves into play. We know how important increasing the average train weight is to boosting the shipment capacity and increasing the efficiency of the entire operation. The request of the Ministry of Railways (MPS) to bring this important quality index up to 2150 tons on the railroad has not been met.

In order to straighten out the situation, the first priority should be to establish a firm prohibition on formation and dispatching of underweight and incomplete trains. In a six month period, the Tbilisi and Samtredia departments shipped out 1285 underweight and 677 incomplete trains. As a result, it was necessary to put together an additional 346 car combinations. There is no other word for this than squandering and wastefulness, the speakers declared. Not a few such examples were mentioned.

Georgia is the site of All-Union sanitariums and many health resorts. Which significantly increases the demands on the organization of passenger transport. To the disgrace of the Transcaucasian railway workers, there has been virtually no change for the better in this vital area over the space of many years. With reason, people express their dissatisfaction with the poorly organized ticket sales, preparation of touring cars, passenger meals at the stations and on the trains, and interrupted schedules. New forms and methods of servicing the public have hardly been adopted at all. And what is being done is usually a mere formality.

In order to break the deadlock, the speakers pointed out, it is essential to create model trains whose teams would be emulated, and which would set an example for the others. The young people and the Communist Youth League should be involved more actively in this important matter. It might be good if the Central Committee of the Communist Youth League of Georgia were to take charge of passenger trains.

The problems currently confronting the railroad are huge and complex. It is very important to address these in a creative manner, with maximum enthusiasm, and to inspire the entire collective to strive for a radical improvement, relying on progressive techniques.

A large scale reorganization of the railway has begun. This involves everyone, from the chief of the railway to the locomotive operator, the dispatcher, and every worker. During the course of this work, the pluses and minuses of the operation have been brought out into relief. This clarity, in itself, is necessitating a more cohesive and goal-oriented activity. The time is now to reinforce the energy of ideas with the energy of practical deeds.

The meeting especially emphasized the necessity of radical improvement in the style, methods and forms of leadership, and the development of constructive criticism and self criticism. Primarily, this pertains to the railway management apparatus. The responsibility of each leader, each railroad worker, for the work assigned to them must be increased. It is primarily a question of strengthening discipline and improving organization. In railroad transport, possibly more than in any other sector of the economy, every violation entails interruption in the functioning of many elements and creates a threat to the train traffic safety.

A breakthrough can only be achieved by radical reorganization of the selection, training and assignment of personnel. In this critical matter, until recently, serious miscalculations have been tolerated. Attentive examination of the practical and ethical-political characteristics of a given worker was often replaced by sheer administration. People were appointed to the top positions basically without scrutiny, on occasion by the mere stroke of a pen. And frequently it would turn out that they could not handle their duties. Thus, in the period from 1979 to 1985, there were four changes of directors at the Tbilisi division, the same number of changes of first deputies, and 19 changes of deputies. Clearly, with such shuffling of the top staff, there can be no thought of improving the situation.

Essentially no reserve of personnel for promotion has been created at the railroad. No concern has been addressed here to the young specialists, their professional growth, education, or study of their practical and ethical characteristics.

In view of the lessons of the past, the members of the meeting pointed out, the first priority of the party organizations of the enterprises and subdivisions of the railroad and its personnel department should be to work better with the people, so that each worker is kept in sight. Dealing with people, and the personal aspect, is in fact the principal strategy of the fundamental reorganization of the party work. Today, the problem is posed as follows: no party organization, no worker should be left without supervision. This vitally important requirement has been incorporated in the new version of the program of the CPSU and the statutes of the party. The strictest accounting should be demanded from each and every one. The fight against unearned income and other negative manifestations should be intensified. Unfortunately, there are also adherents of antisocialist morality at the Transcaucasian railway.

The most decisive measures must be taken against deficiencies and miscalculations in the organization of freight protection. One cannot fail to be alarmed by the involvement of the railway workers themselves in pilferage, as well as instances of bribery, extortion, and conveyance of passengers without tickets. The meeting brought forth absolutely glaring instances. In Spring of last year at the Batumi station, the dispatchers withheld 52 tickets from sale--they "made off with" an entire railroad car. According to information of the Georgian Transportation Internal Affairs Administration, passengers with tickets on the Tbilisi-Sakhchere train were the exception. Basically, entire unticketed trains are riding the rails.

The campaign against negative behavior must be waged firmly, consistently, relentlessly and skillfully, relying on strict supervision, economic management techniques, operational self-sufficiency and economic responsibility of the enterprises and workers. The tone should be set in this matter by the party organizations of the enterprises and subdivisions of the railway.

Reorganization implies a far-reaching exertion of initiative, creativity, and adept adoption of progressive experience. As of the coming year, the Transcaucasian railway workers are scheduled to convert to the Belorussian method. And it is extremely important that everyone understand this is not a question of a mechanical cut in the number of workers, but a new and bold approach to labor organization and management, a goal-oriented adoption of scientific and technical progress, and a radical upgrading of technology. The experiences of the Belorussian railway workers provide ample room for initiative, rely on a proprietary approach to work, and enable a sharp gain in labor productivity while simultaneously raising the wages of the railway workers.

The experience of the Leningrad Transport Center, the Lvov method, and other initiatives should also be used more vigorously. The "brigade" forms of labor organization and incentive should be extensively adopted. Each enterprise must create councils of brigades and brigade leaders and wage a decisive campaign against wage and prize leveling. It is necessary to review the conditions of socialist competition and tailor them to improving the quality indexes and achieving the highest labor productivity.

In vigorously expanding, reorganizing, and upgrading the operation, we must not neglect the implementation of the social program. Of special importance is the most acute problem--housing. The solution of this problem will govern work force stability, the living conditions of the railway workers and their families, the success of the entire operation, and even the safety of train travel. The housing problem at the railway must be solved quickly. After all, there are now more than 10,000 railway workers waiting in line for apartments.

The most attentive consideration should be given to bringing order into the organization of the work and recreation of the locomotive brigades. In a number of places, this has been done quite badly and not even the elementary conditions have been created.

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IMPROVEMENTS PLANNED FOR LOCOMOTIVE FLEET

Moscow ZHELEZNODOROZHNYY TRANSPORT in Russian No 6, Jun 86, pp. 16-18

[Excerpt of article by S. I. Minin, first deputy director and chief engineer of the Central Locomotive Administration of the Ministry of Railways: "The Locomotive Fleet"]

[Excerpt] In view of the prospects, the Ministry of Railways (MPS) has commissioned industry to create new types of electric locomotives, Diesel locomotives, electric and Diesel trains. It was necessary to guarantee good economy, appreciable power, speed, operating reliability, easy servicing and repairs, as well as lower outlay of time and resources on repairs. On display at the exhibit were the 12-axle mainline freight alternating current (VL85) and direct current (VL15) locomotives.

The VL85 is the world's most powerful electric locomotive (10,000 kW), being designed to carry freight trains at up to 110 km/h on railroads electrified with single phase alternating current of 25 kV and 50 Hz. The locomotive is produced in two modifications: one for temperate climate and one for the Baykal-Amur railway. New types of synthetic rubber, lubricant and insulation have been used. The converters, transformers, bearings, electrical machinery, brakes and other equipment are designed to operate at temperatures down to -60°C.

As compared to the standard electric locomotives, the operator's cabin is much larger and comes with radiator, air conditioner, good soundproofing and thermal insulation. It is possible for two electric locomotives to operate within a single system, thanks to automatic guidance. In traction, acceleration with subsequent maintaining of speed at specified current are assured; in recuperation, there is a preliminary application of the brakes and maintenance of specified braking force when stopping or maintenance of specified speed when traveling downhill. Limitation of overload conditi[illegible] and protection of the equipment in emergencies are also provided. The equipment of the locomotive is reliably protected against snow and dust.

The VL15 is a two-section mainline direct current locomotive of 3000 V and 9000 kW. The crew compartment of the locomotive is standard with the VL85. It is intended to haul freight trains of elevated weight and length at a speed up to 100 km/h. Its distinguishing feature is the use of a static thyristor converter to energize the excitation windings of the traction motors

during the recuperation mode, as well as an automatic control system for recuperative braking. Switching of the electric traction motors from one connection to another by the gate method assures a smooth and uninterrupted operation, while the transmission of the traction force to the body frame by slanted couplings assures a high coefficient of utilization of the mass of the locomotive.

For tracks using thermal traction, the Diesel engine developed by the Voroshilovgradteplovoz Production Association may be useful: the 2TE121 two-section mainline Diesel engine of 2 X 4000 HP. It differs from its predecessors by significantly greater power and an ac/dc transmission with silicon gate rectifier. It is equipped with electrodynamic brakes, the body is sturdily built, and the traction motors are suspended in a supporting frame. It is designed to haul heavy freight trains on sections with complicated track profile. Using the 2TE121 will enable a higher average weight of the train and speed of travel.

The TEP70 is a single-section 4000 HP passenger Diesel locomotive with ac/dc transmission, capable of developing speeds up to 160 km/h. It has been put on display by the Kolomenskiy zavod Production Association. The locomotive is equipped with an emergency stopping mechanism, which automatically sheds the load and activates the automatic brakes, sand and the signal whistle.

The Diesel locomotive designers have put on display the series TEM Diesel shunting locomotives of various models. Thus, the TEM7 is of 2000 HP, enabling it to put together train combinations weighing 4000-6000 T. It is possible to employ two of the locomotives in one system. Their technical-economic indexes correspond to the best Western models.

In the current five year period, we are expecting industry to supply the new ER200 electric trains, allowing an expansion of high speed travel.

For future commuter electric trains it is advisable to develop cars 21.5 m long with enlarged doorways, which will allow a larger capacity of the trains and a faster boarding-disembarking of passengers at the stops. Accordingly, on demand of the MPS, new types of electric train are being developed: the ER29 alternating current train with recuperative braking and the ER30 direct current train with pulse regulation during start-up and recuperative braking conditions.

In recent years, the technology of hauling trains of elevated weight and length, heavy and composite trains, has been making increasing inroads at the railways. Even today, many of the lines can haul trains up to 6000 T in weight, or with the use of multiple traction 20,000 T or more. The remarkable initiative of the Moscow Order of Lenin Railway in the hauling of trains of elevated weight and length has become the norm for routine practice at all railways. This was not an easy problem to solve. It required prior training of the locomotive brigades, development of train hauling schedules for the new conditions, a technology of conditioning and servicing of the rolling stock, and equipment for power supply, centralized signaling and interlocking

(STsB), and communications. It was also necessary to change the thinking habits of many of those involved in the transport process. Now, it is difficult to imagine a normal hauling procedure during the period of the summer vacation, construction and installation operations without an organized hauling of composite trains.

The unabated increase in mass transit has led to a new technology: hauling of twin passenger trains, formation of superlong trains and admitting them through sections of track.

Other measures are also scheduled for implementation, aimed at increasing the productivity of the locomotives, the average train weight, the speed of travel, i.e., improving the technical-economic indexes of the operation. The complete technical policy of the locomotive fleet is based on All-Union and branch scientific-technical programs.

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PLANNED IMPROVEMENTS IN RAILCAR FLEET

Moscow ZHELEZNODOROZHNYY TRANSPORT in Russian No 6, Jun 86, pp. 21-23

[Excerpt of article by I. A. Glukhov, first deputy director and chief engineer of the Central Railcar Administration of the Ministry of Railways: "The Railcar Fleet"]

[Excerpt] The structure, technical condition, and reliability of the railcar fleet play an important role in assuring a rhythmical and uninterrupted operation of the railways. Therefore, the specialists of railroad transportation are constantly working with the railcar designers to improve the construction of freight and passenger cars, their technical-economic parameters, and the quality of maintenance and repairs. The international exposition at Shcherbinka dramatically reveals the achievements and future trends of the railcar fleet, acquainting the visitor with modern railcar engineering and progressive repair technology.

At present, all new freight cars in the USSR are made all-metal, using low-alloy steels and rational metal sections in the constructions, sturdy automatic couplers, and bearing mounted axle boxes. Thanks to this, as well as a modernization of the operating fleet of railcars, it has been possible to boost the car load by 5-7 T and thus haul more than 64 million tons of additional freight in 1985.

The share of specialized rolling stock in the railcar fleet is on the rise. Hopper cars for hauling grain, minerals, cement, metal pellets, peat, soot, coke and other loose goods have proven themselves well in operation. These have enabled the creation of integrated mechanized warehouses, a 3-4 fold increase in labor productivity of loading operations, a 1.5-2 fold decrease in operating expenses, and a freeing of thousands of loading workers from heavy manual labor.

On display at the exhibit were specialized cars for transport of granulated polymers with a load capacity of 58 T, having aluminum alloy receptacles, and grain transport cars of 76.5 T capacity with a volume of 111 m^3. Also shown were a four-axle tank car for transport of cement, unloaded by means of compressed air, the model 13-9004 platform for transport of oversize containers and wheeled vehicles, and a special car for transport of thin cold rolled steel sheets in rolled up bundles.

In future, the modernization of the freight railcar fleet will proceed through further specialization, raising the load capacity and volume of the cars, increasing the axial load, and adoption of the Tpr clearance. It is intended to create a new standardization for freight cars, which will have increased load capacity and stronger body members. An industrial test lot of boxcars with volume of 140 m^3 has already been built, the doors of which are equipped with a stronger suspension, protectors against dropping, and stopping springs. Prototypes of a platform car with length increased up to 19.6 m, a lot of tank cars with larger specific volume for the transport of gasoline, and other products have also been built. An eight-axle halfcar of capacity 129 T and an eight-axle tank car with volume of 156 m^3 may also be found on display. These will significantly enlarge the traffic capacity of the railroads and increase the weight of the trains.

In coming years it is intended to complete the conversion of all freight cars to roller bearings, which will greatly enhance their operating reliability, prolong the train mileage without inspection to 500-600 km, cut down on consumption of electricity, axle grease and babbitt, and free up thousands of workers involved in servicing the axle boxes. The final transition will be to manufacture of roller bearings from steel of adjustable hardness penetration and cages of high strength brass, reinforced hub of the axle box assembly, introduction of more effective grease, and use of hollow axles and wheels with improved elastic features.

The conversion of the freight car fleet to composite brake blocks with wire mesh framework and high thermal conducting filler will be fully implemented, and work has also continued on outfitting the cars with air distributors of improved design. The serial production of improved shock absorbers, stronger spring suspension beams and side bogie frames is scheduled.

An important trend in the upcoming work is the comprehensive modernization of the car bodies, replacing the wooden lining with metal and at the same time strengthening the structural members.

The fleet of refrigerator cars is being constantly replenished and upgraded. For the transport of easily spoiled produce, the Production Association of the Bryansk Machine Construction Plant offers five-car refrigerator sections in which it is possible to carry up to 184 tons of freight at a temperature down to -20°C. Special two-car sections are manufactured for carrying live fish and fish planting material. These are furnished with refrigerators, power supply, aeration and ventilation systems. Both these sections are on display.

The fleet of passenger cars is being replenished by the arrival of new all-metal cars, primarily compartment and open cars. All these have a contemporary interior, combination electric/coal heating, an air conditioning or forced ventilation system, and fluorescent lighting. An automated air temperature regulation system in the cars saves as much as 15,000 kWh of electricity in each car during the cold weather season. Passenger railcar design is displayed at the exhibit by a stainless steel railcar for regional traffic and a mail car.

The primary trends in future technical improvement of passenger cars envision a reduction and total exclusion of corrosion damage to the structural members by using more effective coatings, stainless steel, aluminum alloys and other noncorrosible materials. It is also intended to employ new nonflammable materials for the finishing and for manufacture of the interior appointments, convert to centralized power supply, reduce the amount of metal in the construction, improve the comfort, and so forth.

Along with improving the structure and upgrading the design of the rolling stock, a large scale program of enhancing the efficiency of the railcar repair base, its redesign and technical retooling, is being implemented on the railroads. The work is concentrating on wholesale adoption of industrial repair methods in the railcar stockyards, especially the progressive flow line technology, which can boost the turnover of repaired cars by 15-20 percent and substantially improve the quality of their reconditioning. At present, more than 35 percent of the railcar stockyards have converted to a flow line. This process will be actively continued.

In recent years, the capacity and level of technical equipment of the stations preparing railcars for hauling have greatly increased. Today, around 500 high performance railcar repair machines of the Donbass type are in operation here. A working model of this machine is on display at the exhibit. It is also possible to familiarize oneself with the experience in rational organization of comprehensive preparations of railcars for transport at the Yegozovo station of the Kemerovo Railroad, an effective railcar repair complex at the Tosno station of the October Railroad, and progressive methods of repair and maintenance of refrigerators at the Georgiu-Dezh station of the Southeastern Railroad.

Special attention in the development of the railcar repair base is being addressed to the railcar maintenance stations (PTO). At present, the railroads have begun to adopt the progressive technology worked out by the Central Railcar Administration of the MPS, in conjunction with scientists and practitioners. The new technology involves a specialization and a high degree of mechanization of the tracks for consolidated repair of railcars, concentration of machinery, labor and material resources, and a consequent reduction in standstill of completed train combinations waiting for processing in the dispatch yards.

The effectiveness of the new method of maintenance of railcars is demonstrated at the exhibit by the example of Chelyabinsk station of the Southern Ural Railroad, where an automated system has been adopted to control the PTO. The allocation of special, well equipped tracks for repair of cars and the use of the computer have enabled a substantial improvement in utilization of the labor resources here, a quicker and better preparation of round trip trains, and a twofold reduction in train delays on guaranteed stretches of track.

The intensified operation of the stations and the use of long train combinations impose special demands on the mechanization of the work of the inspectors and mechanics in car maintenance. Shown at the exhibit are the RU-6 self-

propelled repair system, designed to transport unwieldy railcar parts to the work site and to mechanize the laborious processes of maintenance of cars while still coupled in trains, as well as a self-propelled cart for inspection of trains and checking of the quality of railcar troubleshooting. Such cart is especially needed by the inspectors where long train combinations are a regular practice.

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